Musical Instruments

आम्नाय-ग्रन्थालय,
भरतनिधि, करौंदी
वाराणसी-5

-ग्रन्थालय
रौंदी, वाराणसी-५

आम्नाय-ग्रन्थालय,
भरतनिधि, करौंदी
वाराणसी-5

India — The Land and the People

MUSICAL INSTRUMENTS

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B.C. DEVA

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आम्नाय-ग्रन्थालय,
भरतनिधि, करौंदी
वाराणसी-5

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Preface

WHILE there are learned and specialised works on our musical instruments, there are not many which are written for nonspecialists. Books on particularized aspects of organology such as instruments in sculpture, folk instruments, catalogues of musea and such others provide information to the scholar who undertakes deeper researches in the field. The present book, however, has attempted to gather together a wide range of data and and to present them in as simple a manner as possible.

It has become an unfortunate habit with many of us to think of the history of only 'classical' sophisticated musical instruments such as the *sitar*, the *tabla* and the *veena*: that too a textual history. We tend to forget the very vast area of tribal and folk instruments which are the far and near forerunners of these concert instruments. A divisive or parochial attitude—the folk versus the classical, the Hindustani versus the Karnatak, for instance—vitiate the entire domain of knowledge. But no society is isolated for ever. Depending on the nature and use of media of communication, every culture has given to as well as taken from others, thus being in a state of perpetual flux. Hence it is interesting and fruitful to study the intercultural movements of our instruments. Further, a musical instrument is very often closely connected to mythology, totems and taboos of a people; and much therefore can be learnt of their lives from their instruments. Bearing these in mind, this introductory study attempts to treat an instrument not as an isolate object but as a part of larger sociomusical dynamics, while, of course, describing its structure; those interested in a more technical study may see the author's *Musical Instruments of India: their history and evolution* as also the ones in the reading list at the end.

Numbers in brackets, in the text, refer to figures.

It is hoped that the subject will fascinate the reader as it does the writer

New Delhi, 1977 — B. CHAITANYA DEVA

आम्नाय-ग्रन्थालय,
भारतनिधि, करौंदी
वाराणसी-5

To
Kukki, Dilli and Babli
with affection

आम्नाय-ग्रन्थालय,
भरतनिधि, करौंदी
वाराणसी-5

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I

Introduction

AS we sit and listen to a programme of the *vichitra veena* or even the *Rudra veena*, does it ever occur to us that these complicated and ancient instruments might have had their humble origins in the *ronza gontam* of Andhra or the *gintang* of Assam: a zither made of a short length of bamboo with one or two strips of its bark raised to form 'strings' beaten with a small stick? Or, perhaps, a masterly recital of the *tabla* is going on; but certainly we do not usually associate it with a cooking pot from which it might have been conceived. The violin bow might well have grown out of the act of fire-making by scraping one rod over another.

Music and musical instruments have become so sophisticated and specialised now that rarely, if ever, do we pause to search for their roots in the simpler acts of life; we take them for granted! But we must ponder over this a little more, if we are to understand the deeper relations to social developments and to the relation of music to its instruments. And as we probe into this area we begin to see that both might have had their beginnings in non-musical activities.

Perhaps, the reader has heard the music of the Nagas of the eastern provinces of India or of the Todas of Nilgiris in Tamil Nadu. These people have a kind of shuffling movement—their dance—accompanied by howls and screeches, resembling their *hunting* calls. The whole performance has a strange feeling of rhythm and melody. And, if you compare these 'sounds' with the high intricacy of *raga* and *tala*, they may not sound 'musical'. Yet there is much 'music' there and many a *raga* and *tala* has, who knows, its first fountains in these non musical acts of howling.

What is true of music in general is more evident with instruments. Many scholars—and, of course, there are many who dispute the point—are of the opinion that quite possibly the idea of making a harp originated in the twang of the hunting or martial bow and the plectrum in the arrow. Indeed, when Ravana enters the final battle against Rama, he proudly says, "Rama does not know of my skill in war. I shall play the *veena* of my bow with the plectrum of my arrow; and the hearts of my enemies will tremble and they will flee in disarray". There are theories that folk stringed instruments like the *tuntune* are really animal traps made portable! These concepts may sound far fetched; but there are instances which are more plausible. Take, for instance, the scrapers used by some of our forest bretheren, such as the Pulayans, to make fire. This is just a strip of bamboo with notches on the surface on which a rod, also of bamboo, is rubbed vigorously and the heat so generated is used to light a fire. This implement becomes the scraper or stridulator called the *kokkara*, the *gargara*, the *ruga braiya*, the *Kirikittaka* or the *scokti vadya* of the devil dancers. More simple to visualise is the transformation of culinary vessels. Pots, pans and other containers employed for storing, measuring and cooking grain, when covered with hide, become drums; and it is not difficult to see how a *tabla* or a *dagga* came into existence this way. An eating plate of metal beaten becomes the *thali*, a common folk instrument. We have all seen road workers pounding sticks with wooden discs attached at the lower end. This is called the *dhimmas* or the *tippani* which is a tool for beating and levelling gravel. As they work, the men and the women sing, keeping the rhythm with the *dhimmas*. After the day's labour, the work movement itself becomes a dance and the stamping stick a musical instrument to keep time—called the *tippani nach*.

Thus it is evident that more often than not the beginnings of music and musical instruments are to be found in tools and activities entirely unmusical.

Again, even what we know and call musical instruments are quite often dual or even multiple in functions: sometimes musical and often otherwise. For example, the conch shell (*sankh*) is a part of the musical ensemble, *pancha vadya* of Kerala, Karnataka, Orissa and so on. But, like the trumpet, the *sankh* was also a martial and heraldic instrument—to announce the beginning of a battle or the achievement of victory. Hindus use it in their worship as well, both as an auspicious sound and as a container of holy water or milk. The *pancha vadya* or the *pancha mahasabda* was also an insignia of authority. When a *mahamandalesvara* —a feudal lord—lost a war, he had to surrender his *pancha vadya* ensemble, of trumpets, gongs, drums and oboes, to the victor. Even the drum is not always restricted to music. It is an effective assistant to the rural announcer or the cinema ticket-seller. And, of course, the African talking drums are famous: the pitch and intensity of their sounds and their patterns are messages conveyed through long distances. Indeed, "to beat the *tammatai*" (a frame drum) is an idiom in Tamil meaning "to blow one's own trumpet". Note again the dual use of the drum and the trumpet. But there are some strange cases like the *lebang gumani* of Tripura. (1) It is a curious combination of bamboo clappers to which are attached miniature *tuntune*-s and is played with claps and twangs of a weird quality, along with other instruments. They say that on hearing the sounds, insects attacking the crops in fields gather round the musicians and are caught. Quite a musical way of preventing agricultural rampage! Even more interesting was the stringed instrument of thieves. As they prowled in the dark, the *kakali* which had a low tone was strummed gently. If no householder woke up, it was an "all clear" for further advance! There is a story in Dandin's *Dasakumaracharitra*, the first Prince's story (about 6th century A.D.) in which the Prince says, "... I learned how the entire city was constituted according to wealth, professions and morals. Then, in the darkness as black as the poisonous stain on Siva's throat, I set out, wrapped in a dark-blue coverall and with a sharp sword buckled on, carrying the necessary equipment and tools; mattock, soft-sounding string instrument *(kakali)*, tongs, dummy head, sleeping powder, trick lantern, 'fly-in-light' bugs, and so forth. I found the house of a wealthy miser, made a breach in the wall, entered the house after having reconnoitered the interior through a small peephole, roamed, unmolested around inside as if it were my own home, stole a large capital of the merchant's funds and made off."

The discussions so far reveal the necessity for a major definition of a musical instrument. Just as music itself begins in the hazy mists of some rhythmic-melodic impulses of man, instruments also have vague origins. Indeed, the first instrument is the body itself and is used for keeping rhythm: stamping, clapping, beating the thighs or the buttocks. This was why our ancients called the human voice the *gatra veena* (the body *veena)* or the *daivi veena* (the God-given *veena)* and all other *veenas* as the *daravi veena* (*veena* of wood). The only definition that we can think of then, is that, any object which can produce 'music' is a musical instrument: from a piece of stone or a leaf to the most complicated computerised electronic tone synthesizer.

The word *gatra veena* may make us wonder at the usage of the word '*veena*', because we usually associate it with stringed instruments of the plucked variety. However, it seems to have meant any instrument, including the voice, capable of producing melody. Strings of all kinds were called *veena*: harps like the *chitra* and the *vipanchi*, fingerboard plucked ones like the *Rudra veena*, the *Sarasvati veena* and the *kacchapi veena*, bowed ones such as the *Ravana hasta veena* and the *Pinaki veena*. Wind instruments similar to the *nagasvaram* and the *shehnai* were often known as *mukha veena*—that is, a *veena* played with the mouth (=*mukha*); even today the Hindi *been* means the *Rudra veena* (a zither) as well as the *pungi*, the snake charmer's wind instrument. Similar confusion exists in *mardal* or *madal* which is a two-faced drum from the tribal areas of Madhya Pradesh. But *maddalam* or *maddale* in the southern parts of our country is very different in shape and structure, though it is also a bifacial drum. Again was the *muraja* a large *damaru* or was it something like our present day *mrdanga*? These questions of nomenclature may seem pedantic to the lay student of music, but become extremely important to the specialist historian. The confusion is evident, for instance, in the case of the *veena*. We now use it to mean a lute or a zither, with or without frets. However, if a historian meets the term in an ancient text and concludes that today's *veena* had a hoary ancestry, he might be wrong; for the archaic word might have meant something else: a harp, most probably! This is not idle conjecture or vague pedantry, as there are many cases where such altogether unconnected derivations are made and discussions by organologists tend to lose all sense of direction or relevance, resulting in warped history.

It is necessary, therefore, to be on one's guard when studying the past story of our instruments. Any reference in a book without coroborative material will not mean much more than a pointer. Other sources will naturally have to be examined. These include literature (proverbs, folks songs, folk stories, sophisticated literature and so on), epigraphic records, books and manuscripts on music, paintings, sculptures as well as a careful survey of tribal and folk instruments as they exist. We know only too well the idiom, "to blow one's own trumpet". The Kannada equivalent is "*jagante barisu*". *Jagante* is a metal plate used as an instrument by mendicants (*barisu*=to play); this proverbial phrase, then, shows the existence of such an instrument in Karnataka. There is an Oraon song in which a boy says,

> On the fort hill, I have seen beans spreading and ripe.
> A monkey is eyeing the beans, and I say,
> "I will kill you with my bow and arrow
> I will skin you
> And make a *mandar* of the skin.
> When I play the *mandar*
> Village maidens will come to me."

Here we find an interesting reference to the fact of a monkey's hide being utilised for making drum heads by certain tribes. The Santals also use ape skin for making their drum, *tumda.* To catch the animal, they go to the forest where monkeys live. And when they have located a suitable haunt, they chant the Hanuman *mantra* by which the animals become immobilised; then they are caught and killed, the skins being used for making drums. Apart from folk stories and songs, classical literature—right from *vedic* times—has a fund of information which has yet to be fully documented. For instance some of the *vedic* references are: *aghati* (cymbals), *adambara* and *lambara* (drums), *nadi* (flute), *karkari* and *vana* (stringed instruments). *Ramayana* and *Mahabharata* have: *noopura* (ankle bells); *bheri, dundubhi, mridanga, pataha* (drums); *sankh* (conch), *venu* (flute); and *vallaki*, a seven-stringed harp. Similarly, literature from all other languages could be examined for a fuller study. But the most fascinating and rewarding source (though to be scrutinized with great care) is the visual representation in sculptures, icons, reliefs, wall paintings, miniatures and illustrated manuscripts. The data are vast and varied, extending in time and space. Among the earliest evidences of this kind are finds from the Indus valley scripts and heiroglyphs. We also have illustrations in many cave paintings—right from the prehistoric ones in Madhya Pradesh to Ajanta. Temples and monuments scattered all over the land offer us rich quarries of information and so do the miniature paintings. All this is too big a storehouse for any one person to handle. Piece by piece the jigsaw has to be put together by archeologists, art historians, linguists, ethnologists and musicologists working as teams for several years. The work has just been started—by a few individuals—and in times to come we will be able to get an idea of not only the history of our instruments, but of their fantastic variety.

These motley forms have posed a big problem of classification. How many kinds of instruments are there? Are they to be grouped according to the material they are made of? Or, should the method of playing be the criterion? Is it the musical function that decides the issue? The problem, then, is not easy and many schemes have been tried both in our country and outside.

On the basis of their musical utility three classes were recognized in India: those meant for accompanying singing were known as *geetanuga,* and those used in dance as *nrtyanuga*; solo instruments were *suska.*

The Chinese classification depended on the materials of construction: *kin* (metal), *che* (stone), *t'u* (earth), *chu* (bamboo) and so on. Western scholars tried other ideas and, in the 19th Century, Mahillon divided instruments into four broad categories: autophones (later called idiophones) which require no retuning once they are made—for instance bells, rods, rings, gongs; the membranophones or drums; the chordophones or strings; the aerophones or wind instruments. It is usual, in popular works on music, to include the first two in a common class: that of percussion instruments.

But the classification prevalent throughout the world now was formulated in India at least two thousand years ago. The first reference is in the *Natya sastra* of Bharata who is said to have lived sometime between 200 B.C. and 200A.D., though this date is still a matter of discussion. He also gave four classes: *ghana* (solid) or idiophones, *avanaddha* (covered vessels) or drums, *sushira* (hollow) or wind instruments *tata* (stretched) or stringed instruments because they have tensed guts or strings. Later writers also tried their hands at grouping instruments. For example; an author gives three types: *tata* (strings), *vitata* (drums) and *tata-vitata*. Another thought of three kinds: *charma* (leather), *tantrika* (string) and *ghana* (solid). Kohala, before the 6th century A.D., has *ghana, sushira, charmabaddha* (bound with leather) and *tantri*. The Sangam works of Tamil—2nd to 6th Century A.D. give us five classes, *tole-karuvi (tole*=leather), *narampu-karuvi (narampu*=gut), *tulai-karuvi (tulai*=hole, hollow) *kancha-karuvi* (*kancham*=metal) and *mitatru-karuvi* (human voice); *karuvi* in Tamil means a tool or an instrument. Notice the inclusion of the voice also in the family of instruments, which reminds us of the *gatra veeena* of Sanskrit texts.

Today, Bharata's four major groups are accepted. However, for technical purposes a detailed depth classification is necessary. According to the latest attempts there are sixteen kinds of *ghana*, eleven of *avanaddha*, twelve of *sushira* and fifteen of *tata vadya*, leaving aside the modern electronic instruments.

Vadya, of course, is a very general term for instruments, though in ancient literature we meet other words like *atodya* and *turya* synonymous to it; *karuvi* has already been mentioned.

The importance of instruments and their history in the overall panorama of music cannot be overemphasized. First, we have to admit that without them not much musicology is left. It may sound an exaggeration, but it is true that if there were no musical instruments, there might not have been any music theory or grammar! For there is no way of measuring vocal sounds *directly* in the throat itself. On the other hand, the lengths of strings, their number, tension, tuning and such measurable quantities make it possible for us to develop sound-musicology. Similarly, the number of holes in a flute or the number of frets in a *veena*, as well as their distances also afford us methods for studying musical scales. One of the earliest such statements is by Bharata himself. In his *Natya sastra* he gives an experiment on two harps—called the *dhruva-veena* and *chala veena*—by which he defined the finer intervals of pitches. Again, Narada (1st Cent. A.D.) was the first to tabulate the correlation between the *vedic* and the lay notes, using the flute. Ahobala of the 17th century—to mention another important example—describes the placement of frets on the *veena* of his times; and from this it is possible to calculate the approximate relations of notes in the musical scales then prevalent. Secondly, and such musicological importance apart, the very nature of instruments has had profound influence on the development of our music. This is difficult to discuss here, but we may note that by about the 10th century A.D., harps disappear from the Indian musical proscenium and *veenas* such as the *Rudra veena*, the *kinnari*, the *kacchapi* and later on the *sitar*, the *sarod* and the *Saraswati veena* become popular. This has brought in an enormous change in our music, both in its practice and in its theory. Thirdly, the substance out of which instruments are made give us important information on the material culture of a people. The wood, the kind of bamboo or grass tell us about the flora. The nature of the hide, deer, cow, buffalo, alligator, iguana, gives us clues on the fauna. So also, the metal used in making strings or the earth for fashioning pots of drums are indicative of the technical know-how at the disposal of a society.

II

The Cultural Perspective

BEFORE proceeding to study the history of the classes of *vadya* or even individual instruments it is necessary to discuss, to some extent, the cultural history of our land, its music and musical instruments. This is particularly important in view of what has been said so far. Our earlier observations would have made the point obvious: that to write an organological history, it is not sufficient to refer only to texts on music, but tribal and folk life, art history in general, linguistic movements in the country, sociological dynamics—all these and much more—have to be brought in. Only then a correct perspective of the whole situation is possible and one does not get caught in static text-book knowledge. The people of a nation—their work in daily life, literature, painting, technology and their migrations—produce its history and it is to them that we should turn to understand the cultural developments of a society.

This is a book on the musical instruments of India: a very obvious and redundant statement! But the implications of such a simple sentence may not be so apparent, at first, because even at the start we found how nebulous a definition of 'musical instruments' could be, specially bearing in mind that they might have had nonmusical origins and could also be used for nonmusical purposes.

The next difficulty that confronts us is the phrase 'of India'. How is one to define or limit 'India'; for unless this is understood, it may not be possible, again, to get an unbiased viewpoint. Take the harmonium, as an example. This is now 'Indian'; but has it not been imported from Europe? On the other hand, is not the principle of the harmonium reed found in an Indian wind instrument, the *khung* or *rusem*, of tribal Manipur? With two such apparently contradictory facts clashing, how is the 'Indianness' of the harmonium to be understood?

The temptation to trace the beginnings of every instrument we use to our own soil is great. However, there are really great scholars who hold that all of them came from outside India! The truth is, evidently, somewhere between the two: that many instruments are indigenous and many are imported. Many migrate out and come back in a different form with perhaps a different name; many find their way into our country and are perhaps given our names.

This process is only a miniature picture of the larger canvass of Indian culture, much of which is local but much of which is also from beyond its borders. Can we take the political map as a standard? Evidently no. After all, what was 'India', say forty years ago has been divided into different political regions, without any recognizable divisions in music. What about ethnic and cultural fences? This is sightly better: but we know that the Polynesian blood and racial stratum run from India to South-East Asia. Perhaps—and this is a conjecture—there might have been ethnic relations between our tribal people and the Negroes of Africa. Geographical boundaries, however, are more stable through the ages. But patterns of life become common or similar even across mountanous walls and watery expanses, due to human migrations: for instance, Kashmiri music as well as dance are so much like those in southern Russia, and in Indonesian literature, dances and musical instruments have a very large Indian content. In the face of all these currents and cross currents, we may agree, for purposes of this study, that our musical map will be bound roughly by the Afghan mountains and the Himalayas in the north, the Sindhu river in the west, the Meghalaya hills in the east and the oceans in the south, including the bay and sea islands near the main land. In this vast and ancient expanse each people have made their own contribution to the music of the country; and what we now know as our music and instruments are the gifts of all these civilizations.

We do not have sufficiently definite proofs of the earliest human races in this subcontinent. Perhaps, they were the ebony coloured ones: the Negrito. Here is an area which is still dark as far as music and organology are concerned: for we have not yet explored the racial and musical relations between our tribes and those in Africa, to the extent necessary. Racial characteristics apart, similarities between the Dravidian languages and certain African tongues (Wolof) have been noted, for example:

	Wolof	Dravidian
Finger	*baram*) *waram*)	*beral* (Kannada) *viral* (Tamil)
Leg	*yel*	*Kal* (Kannada, Tamil, Telugu)
Brinjal	*batanse*	*badane* (Kannada)
Water pot	*pana*	*panai* (Tamil)
Elephant	*nei*	*anai* (Tamil) *ane* (Kannada) *enugu* (Telugu)

These are only selected examples; and more have been found. But, what is more to the point and of relevance for us here is the similarity of a number of instruments in these geographical regions. At least ten instruments of the Belgian Congo and Ruanda-Urundi of Africa have close likeness to many of our tribal ones, particularly of Madhya Pradesh, Orissa and Andhra. Is this very striking resemblance merely a coincidence, or does it lead to inferences on possible contacts between the two now separated cultures? Or were they one culture in times far in the past, later torn asunder by geological cataclysms? As far as is known Lemuria —a continental stretch form Africa, through south India, to Australia—existed in geological times; but there does not appear to be any evidence of human societies and their migrations during those ages. How then does one explain what appears to be a commonness of instruments in Africa and India, unless there were later movements of societies by sea?

The next important civilization is what is called the Dravidian, whose antecedents are still a subject of debate. We have just seen some linguistic and even probable organological affinities between Africa and our own land. Could they be related racially also ? According to one theory a maritime people reached India in the second millennium before Christ and their progeny from the previous settlers became the Dravidians. There is another view that this race is a descendant of a Mediteranean one. According to still another hypothesis, the Aryan mingling with the indegenous population produced the Dravidian. Finally, some very great scholars hold the opinion that the distinctions such as Aryan and Dravidian are spurious, and there was but one kind of society in the whole of the subcontinent.

In view of such a diversity of conclusions, it is better to leave this question alone now and, for the sake of simplicity of study, treat the two separately: first, the Dravidian (?) commencing with the Indus valley complex and continuing as a substratum into later peninsular cultures, and second, the 'Aryan' commencing with the '*vedic*' period and continuing into the present, enveloping the whole of India in a unifying mantle.

The Indus civilization, first discovered at Mohenjodaro and Harappa, but now known to extend to far flung sites reveals itself as from about

3000 B.C. The musical instruments so far excavated or seen in the pictographs are not many. Castanets and cymbals have been found; a statuette of a woman carrying what looks like a *damaru* has been unearthed, also whistles made of clay. Seals and heiroglyphs show long drums and harps. All these lead to the inference that the music of those days was not very elaborate.

Whether we can really relate the Indus culture to the ancient Dravidian one is a moot question. Even if this is established, it is doubtful if the later societies of the south retained the music of the Indus people and, perhaps, this is for ever a closed chapter. However, Tamil texts from the early Christian eras, which are the oldest written source material we have of this region, speak of the *yazh*, the *kuzhal* and the *maddalam*. The *yazh* was a kind of harp and many varieties of it were known. Were they imported or were they entirely local ? There is room for question and investigation here too, for at least in the case of the *makara yazh* a Greek association might be suspected. The *kuzhal* was a flute and the *maddalam* a drum.

The coming of the Aryans and their settling in the subcontinent is one of the most significant events in Indian history, granting, of course, that they were foreigners. There is no gainsaying the fact that the foundations of much of later thought, religion and art were laid by them as early as 2500 B.C.; and their hold is so strong on our minds that all aspects of our life are invariably traced to the *vedic samhitas* which are the recorded versions of *vedic* experience. For instance, all Indian music is always considered to have sprung from the *rgveda* and the *sama veda*. True, this is the oldest grammatized music that is known to us. But the contributions of strains other than the Aryan to the general pattern of Indian life and music cannot be denied; and to consider that our culture has necessarily a monolithic genesis may not be reasonable at all. As we go on further with this study it will become more and more clear that various other tributaries flowed—and are still flowing—into the mainstream to make our life pattern so beautifully varied as it is.

To return to the subject proper, *vedic* texts yield some information on the instruments employed in those days in rituals and entertainment. There was the *aghati*, probably a cymbal. Drums such as the *bhoomi dundubhi, dundubhi, vanaspati* were used. Among the flutes were the *toonava* and the *nadi*. Among *veenas* were the *vana*, the *kanda* the *godha* and others. Today these are only names, because, except in a couple of cases, there are not enough descriptions to allow proper reconstruction of these instruments. Here, once again, the similarity in names point to the very obvious closeness of the Aryans to other Asian cultures. For example, *veena* in Sanskrit is too much like the ancient Egyptian *beent*, the Sumerian *gisban*, the Japanese *biwa* and the Chinese *pipa* to be dismissed as fortuitious.

The invasion of India by Persian and the Mongolian armies brought in a newer stream, though contacts with these countries were centuries older. The mercantile, religious and martial connections of northern India with its bordering lands had been in existence from ages, and with these also were linked the exchange of music and instruments. Various flutes and drums as depicted in our own murals as well as in those of Central Asia, besides certain common words in music, bear ample testimony to this fact. But, a drastic encounter began by about the 11th century A.D. from when what is termed the 'Islamic' influence noticeably begins. However, it may not be correct to call all this 'Islamic', except for the Sufi content and spirit, just as it would not be right to think of a musical instrument as of 'Hindu' origin, except the *damaru,* the *veena* and the *venu* which have definite associations with the pantheon. Be that as it may, along with the fresh ingress developed different musical forms and quite possibly even instruments such the *daff,* the *sitar*, the *sarode* and the *shehnai* were brought by these aliens.

While it has to be conceded that a number of instruments have come to us from outside, it is equally true that quite a large number have also travelled out. The Far East has received many instruments from India, mainly through traders and Buddhist monks who went on missionary work; so has the middle West. As a matter of fact, the general consensus of opinion is that bowed instruments originated here and then migrated to various parts of the world. Again, from about the 8th century A.D. till about the 15th Yavadveepa and Suvarnadveepa (present Indonesia) were highly Indianized musically, which fact is revealed in the names of their old instruments: *padahi* (Skt. *pataha*), *murava* (Skt. *muraja*, Tamil *murasu*), *vangsi* (Skt. *vamsi*), *kahala*, *ghanta* and *bheri*. Today the west has taken to the *sitar* and the *tabla* without any kind of reserve.

Contacts with the west have brought certain changes in our music in general but discussing them here may be out of place. However, there are a few facts worth noting which are pertinent to the present subject. The first is, of course, the influx of certain instruments. The violin is one. It will be of interest to know that in all probability the first bowed instrument, which might have been the parent of the violin, was Indian. But the violin as it is now found in our country came to be used in classical music about a hundred years ago, though there are sculptural evidences of violin-like instruments, probably as early as the 10th century A.D. It is generally agreed that Baluswami Deekshitar of Madras adapted it to Karnatak music in the 19th century. He might have learnt to play it from the European bandmasters stationed in Fort St. George in Madras. His family's disciple, Vadivelu, was a great master of this instrument and was honoured by the Maharaja of Travancore with the gift of an ivory violin. It has now come to stay as a major instrument in south India, and a few Hindustani musicians have acquired a degree of competence in it. The clarionet has also found a place, to some extent, in serious music, though it is really used in popular and light music, and in street bands. It has not found favour with the more sensitive connoiseurs, perhaps, because of the presence of keys to close the holes. Whereas in Indian oboes (the *shehani* and the *nagasvaram*) the holes are closed with the fingers thus obtaining a variety of finer pitches and *gamakas*, the mechanical keys in the clarionet make this impossible. The most ubiquitous invader is the harmonium. Since it is easily carried about, requires no tuning and is not very expensive, it has been used extensively in folk music, 'light music' and Hindustani classical music; though Karnatak classical music has so far kept it out of bounds. But the fact remains that its very structure makes it incapable of producing accurate pitches (*srutis*) and ornaments (*gamakas*) which are some of the most beautiful ingredients of our music.

A major new dimension introduced from the West is orchestration. Not that India did not have group playing; but orchestration and harmonization are new practices. Instrumental ensembles were known as *kutapa* in Sanskrit; they are called *mela* (*melam*) in south India. Today, such instrumental assembly is known as the *vadya vrinda*, familiar to all of us over the All India Radio which maintains some of the biggest *vrindas* (group). As early as 200 B.C. Bharata described in detail the *kutapa* for his drama. He gave full instructions on how to arrange it (*kutapa vinyasa*): the places for the *veena* players, the drummers, singers and so on. We still have a number of such ensembles of various types and sizes with us. The *panchamaha-sabda* was already referred to. There are the *pancha vadya* of Karnataka, Kerala and Orissa comprising some or all of the following instruments: *kombu* (horn), *sankh* (conch), *mukha veena* or *mohori* (oboes), *dholak*, *timila* and *idakka* (drums), *jhanj* or *talam* (cymbals), depending on the region. The *nayyandi melam* of Tamil Nadu and the *karaga mela* of Karnataka are also very popular. Besides these there are temple *kutapa* such as the *ashtadasa vadya* which may not really have eighteen instruments as the name implies. A common sight, and sound, are the wedding bands in large as well as small towns, with quite a few Western instruments—the trombone, the trumpet, the accordion, the kettle drum etc. Instruments in the police and armed forces are almost entirely foreign.

Except the last mentioned, all the other instrumental troupes play 'Indian' music; but orchestration as borrowed from the West is an entirely different matter. As understood at present, this means that the music is based on chords (a set of notes sounded together) and harmony (a sequential arrangement of chords), most often involving transposition (changing the scale by playing the same notes, but with a shift of the tonal base). While all these are of great importance to harmonic music and of great beauty, they are alien to the Indian musical genius. But, and this is a significant qualification, a process such as transposition kills all the finesse of musical intonation which is the very life of *raga*. Similarly, the technique of harmonic music eliminates all *gamakas* which add so much refined elegance to the rendition; it is also doubtful if intricacies of *tala* are possible with such music. Now, these are elements which we cannot afford to lose, at any cost; and under these conditions, can orchestration be accepted as a creative stimulus to *raga* music?

Orchestration has certainly given us new dimensions in sound: tonal mass and colour which have been of great utility in programmatic music—where music is meant to illustrate, emphasize or even imitate certain actions and events (thunder, running water, patter of rain, etc.) in films, dramas and ballets—though *vadya vrindas* produce music without such programmatic reference. Sometimes such music is of a high order and quite often based on *raga* patterns and folk tunes. As such this can be good Indian music, but definitely not good *raga* music.

This brief survey of the cultural history of our instruments brings into focus the dynamic nature of all social processes. It reveals the highly eclectic nature of Indian society and the hazards of a journey in the monorail of textbook study. Our society, like any other, today is the confluence of many tributaries and should be viewed as such. Only, the problems in India are much more complicated due to the great age of the civilization, the wide and uneven spread of the land and the multifarious races that have gone to the making of our life.

III

Solids

IT is not unreasonable to assume that idiophones might have been the oldest musical instruments used by mankind. Naturally, the primeval *ghana vadya* is the human body itself; particularly all the rhythmic acts and movements it involves in. Hands are clapped, or thighs and hips are struck with hands to accompany dance and music. Of course, this is not confined to tribal and folk music; for, the *tala* claps, hand movements and counting fingers are all sophisticated and gramatised versions of the primitive actions. As for more accomplished art, a *ganaka* was a part of the group of *vedic* ritual singers and such *ganakas* kept rhythm during the ceremonial recitation by clapping hands. Even today such *tala* keepers are common in Karnatak music concerts, particularly in company with instrumentalists who cannot keep the *tala* themselves as the vocalists can. The next step can easily be imagined: it must have been to emphasize the sound of the rhythmic beat by employing solids harder than the body—stones, sticks, and so on. Immediately, a *ghana vadya* has been created and instruments such as clappers, castanets, *danda*, bells and cymbals developed.

Ghana vadya, as they are usually constructed, are not capable of producing definite pitches that are required for creating a melody. That is why you will not find many of them in classical music. Also, most often the sounds produced by them are shortlived and hence such instruments are better suited for *tala*. However, there are exceptions like the *jaltarang* and the *kastha tarang* which, within severe limits, are adequate for melodic music also.

Perhaps the simplest instruments in this class are rods, rings, jingles and clappers. Sticks—*danda* or *kolu*—can be seen almost anywhere. The best known examples of the use of the rhythmic stick, coloured or plain, with jingles or without, are from Gujarat and the southern parts of India. In the former, where they are called *dandiya*, two beautiful lacqured sticks of about thirty centimeters in length are held, generally one in each hand, and struck together to the rhythm of the dance called the *dandiya ras*. Similar group dances are very popular in Andhra, Karnataka, Kerala and Tamil Nadu where the instrument is known as the *kolu* and the dance as *kolattam*. One striking variety of this dance is the *pinnal kolattam* (south India) or the *gomph* (Gujarat). Each dancer holds in one hand the *kolu* or *dandiya* and with the other hand a rope or a long ribbon. As the dance proceeds, the choreography is so arranged that the ribbon gets plaited into beautiful designs and on the reverse movements of dance it gets deplaited. (2)

The *villu kottu* or *ona villu* is a small idiophone from Kerala. It consists of a coconut spathe or a thin and narrow wooden piece bent in the form of a bow, and hence the name, (*Villu* means a bow). The 'bowstring' is replaced by a thin stick of bamboo which is beaten with another bamboo piece. Since this instrument is used in the *onam* festival, it is also called *ona villu*.

The Laddi shah singers of the Kashmir valley play a kind of jingle johnny known as the *dahara* or the *laddi shah*. It is an iron rod of about three quarters of a meter in length, bent like a walking stick at the top, with a small cross 'handle' at the other end. A number of metal rings are put onto this bar which is shaken to the rhythm of the *faqir's* song.

Another simple instrument used mostly by certain sects of mendicants in the north is the *chũdiya*. A few metallic bangles are worn on the wrist; the singer holds a little wooden stick in the hand wearing the bangles and strikes them with it by a backward stroke, producing a very attractive jingle.

There are a few instruments which, because of their odd shapes and sizes, cannot be included in any simple or homogeneous category. Nevertheless, they are of interest not only as strange and exotic specimens but also due to their ethnological significance.

Among these is the 'slit drum'. Actually it is not a drum at all, in the sense that it is not a hollow body with a membranous cover. However, since it is a percussion instrument, it is usual to call it a 'drum', in most music books. A good example is the *songkong* of Tribal Assam. The Ao Nagas who inhabit this area also call it *tongten* and *sheku*. The *songkong* is kept in a hut near the *moorung* which is a dormitory for tribal bachelors, and at the imminence of any danger or threat, is beaten loudly by the boys. It is thus a signalling device; but as the wood with which the body is made is resonant, it is also used as a musical instrument for dances. Mills, an officer of the Indian Civil Service, who visited these Nagas in the early decades of this century, describes it thus: "Perhaps the most striking specimens of Ao handiwork are their great drums (*songkong* or *tongten*), or xylophones as they should be more accurately termed—each a huge log, sometimes 37 feet and 14 feet in girth, laboriously hollowed out through a long slit running down the length of the body of the drum...save in the Chapvukong group (a region) every 'khel' (a part of the village) has a drum, and they are remarkably uniform in pattern... One end is carved to represent what is undoubtedly a buffalo's head, with the horns lying back along the drum, though the Aos have forgotten this and regard the head simply as the head of the drum, carved as their forefathers had always carved it, and the horns as the drum's arms. The tongue of the buffalo often protrudes and turns up against the upper lip, and, as if to personify the drum still further, a human face is often carved on the tongue. In beating the drum, which lies with the slit at the top, the bucks and boys of the 'mourung' line up along it. One stout fellow gives the time with two levers which he allows to fall on to the drum, while the others drum and roll with large wooden dumb-bells which they strike on the edge of the slit.... Accordingly as it is beaten an alarm can be given, the taking of a head can be celebrated, or mere light-heartedness at some festival can be voiced." Mill's notings on this are also of interest: for he points to the fact that the slit log-drum could have originated in the beating of canoes on the sides, as is done in Fiji an Papua, the beating sticks being altered paddles. It is also possible that food troughs and brewing troughs (vats) similar to the *songkong*, including the laddles, could have been turned into this instrument.

A portable version of the 'slit drum' is known in some parts of the country. It is a bamboo piece of nearly 45 centimeters in length, with a slit or sometimes the bark being thinned out at a part between two nodes. Since dry bamboo is naturally hollow, no scooping is necessary and a ready made resonator is thus available. One such example found in the north east is called the *tak dutrang*.

Another variety is the *katola* used by the Abuj Marias of Madhya Pradesh in their dance and music. This is also of wood, hollow and trapezoid, somewhat like a winnow in shape and size. The longer side is open as a narrow slit through which, of course, the scooping out of the inside could be done. The idiophone is suspended from the neck of the player who uses sticks to beat the instrument.

Musical pillars and icons are examples of architectural and sculptural genius which could create out of stone as well as metal, forms that are not only of visual beauty but also of musical value. There are a number of temples in the south which have lithophones and metallophones which, on striking, give out regular tones: that is, they are musical instruments made of stone or metal. Fine specimens of such pillars may be seen in Hampi (Karnataka), Tadpatri and Lepakshi (Andhra), Madurai, Tirunalveli, Alagar Koil, Tenkasi, Courtalam, Alwar Tirunagari and Suchindram in Tamil Nadu. The *mandapam* (congregational hall) of the temple in Tirunalveli is of particular interest: it has pillars, each with fifty pillarets! A musical statuette of Lord Ganesa has been found in Tanjavur; and in Nanguneri, Tamil Nadu, there are beautiful large statues of Manmatha and Rati, the god and goddess of erotic love. It is, of course, not definite whether these pillars and icons had any really musical functions, because the sounds they emit have no definite pitches as required in our music, nor is their quality very rich; also, the way they are constructed, specially when in clusters, is not conducive to efficient playing. One could, therefore, consider them more as curios, though scientific studies are now going on to determine their tone colours and pitches.

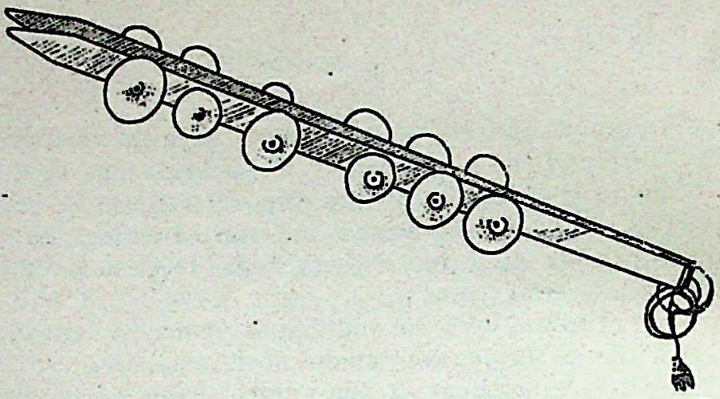
One sometimes meets the *kastha tarang* in modern ensembles and orchestras. Most probably this is an alien instrument given an Indian name; for we have no tribal or folk counterparts from which this could have developed. The *kastha tarang,* as is found now, is a set of a number of wooden *(kastha)* slats of varying lengths and thickness fixed more or less loosely on a frame. Under each *kastha* a tube of determined length and diameter is attached, to give proper resonance and volume to the sound. These wooden bars are arranged in a row of increasing pitch and struck with a pair of sticks for playing the melody. The beginnings of this instrument, called xylophone in English, are found with African forest dwellers. In its simplest prototype, a woman sits with her legs stretched straight and wide apart in front of her; and across the two legs are placed a series of stone slabs which are beaten to give a passable tune. A more sophisticated construction is seen in the *gambang* of Indonesia, wherein well tuned wooden pieces replace stone slabs and are fixed on to a frame. In the same country they have metal xylophones—metal bars instead of wooden ones—called the *saron.* Indian musicians sometimes play the *nal tarang* in which metal tubes (*nal*) are employed instead of flat bars.

The *tokka* of Assam is a primitive *ghana vadya* put to both musical and non-musical uses. A bamboo piece of about a meter in length or less is slit lengthwise, leaving one end intact. At this end, the sides of the tube are carved out to make a handle. The *tokka* is held here and is either rattled or beaten on the other hand, the slit portions clashing against each other. While the instrument is used in folk music and dance. it is also a hunter's tool. For instance, in parts of Mysore a smaller variety is employed by elephant hunters. During the elephant hunt, locally known as the *khedda*, a number of men, each having a small clapper, surround the glades where the animals live in the wild. They then begin to beat and rattle the clappers vigorously, shouting all the while. The elephants get scared and start running. But the hunters, stationed in a big circle round them, begin to close in and finally drive the prey into special penns.

A kind of *tokka*, with the addition of strings has already been briefly described; this is the *lebang gumani* of Tripura. (1).

A small rod idiophone of fine musical value is the *moorsing* or the *moorchang* which in English is called the jew's harp or the jaw's harp, though there is no resemblance to the harp at all. This diminutive instrument seven to eight centimeters in length is a folk instrument found in places such as Rajasthan and the Brij districts of Uttar Pradesh. But in the south it is very frequently used in concert music as a kind of rhythmic auxillary to the *mridanga, ghata* and the *khanjeera*. While in its simpler forms the instrument is made of bamboo, such as the *gagana* of Assam and certain tribal specimens, the more common variety is of iron, shaped somewhat like Lord Siva's *trishul*, the three pronged trident. The main frame has an annular base which does not complete the circle. The ends of this incomplete ring project into two prongs. Fixed to the inner side of the ring and passing between the prongs and free at the distal end is a thin tongue which is a little longer than the forks. The player holds the *moorchang* with the palm of one hand and prongs are held firmly between the teeth. The tongue or lamella is now plucked with the fingers of the other hand. The mouth of the player acts as a resonator and by altering its shape as well as controlling oral breathing, extremely fine, delicate tonal shades are produced. In Hindi literature the instrument is also referred to as the *mukha chang*, evidently because it is held in the mouth (*mukha* = mouth), for instance in the poems of Chaturbhujdas and Surdas. The Sanskrit text, *Sangeeta parijata* of Ahobala also calls it *mukha chang*. (3)

The *kirikittaka* or its varieties is one of the most primitive instruments we have. This is referred to in English as the scraper, rasp or stridulator and was earlier mentioned in connection with the evolution of musical instruments. We noted too its very close likeness to the fire-making implement. The scraper generally consists of a main body on which there are dents against which is rubbed a rod, generating a weird sound. Scrapers are of course not confined to India but are known in far flung areas of the globe. In China they have the *yu* in the shape of a tiger; its spine is notched. The *omichicahuagtli* is a bone rasp found in Mexico. In our own country there are many different types: the *ruga braiya*, the *doddu rajan*, the *kokkara* and so on. All these are tribal instruments and except the *kokkara* which is an iron tube, are made of bamboo. About fifty centimeters in length, they are hollow pieces of



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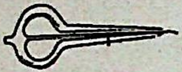

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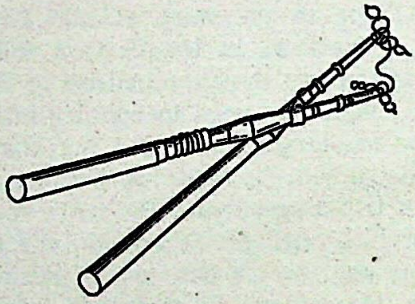

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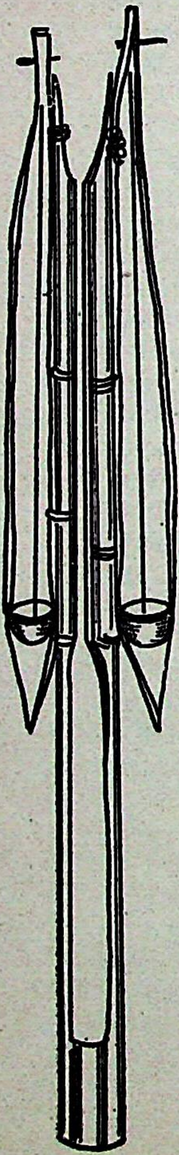
1. *Lebang guṁani*
2. *Kolu* or *danda*
3. *Moorchang*
4. *Seemu*
5. *Chimta*



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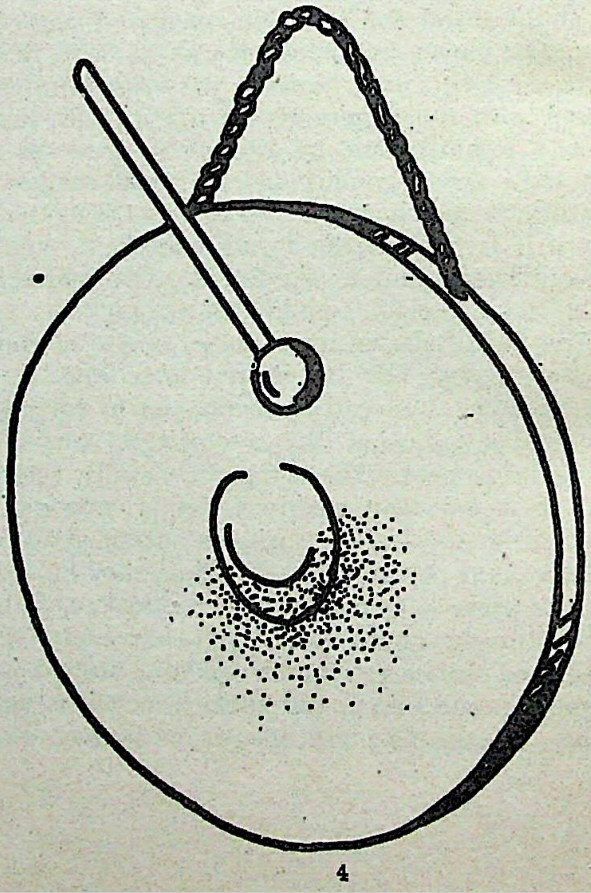

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bamboo with a series of crosswise serrations on the surface. The wall of the instrument is often slit to some length to give the stridulator more resonance. Sometimes this is also achieved by attaching a gourd, as in the *ragabd rajan* of the Savaras. With these people this *rajan* has a special significance. Verrier Elwin describes it as "a special kind of rasp.... used at marriages.... The serrated bamboo is fitted to the stem of a gourd drinking-dipper and is decorated with peacock's feathers. The members of the bridegroom's party go playing on it to the bride's house, where the youth fills the gourd with wine and hands it to his father-in-law. The older man drinks, refills the gourd and hands it back saying: 'Today I give you my daughter. If I change let this gourd, this bamboo and peacock-feathers witness against me.' The scraper seems to have been of particular use in tribal and folk dances, more specially related to exorcism and certain Saivite dances. For example, the Andhra warrior-writer, Jaya, of the 13th century, describes in his Sanskrit work, *Nritta ratnavali*, a *desi nritya* (a 'nonclassical' dance), called the *Siva priya* which was performed by the devotees of Siva during festivals dedicated to Him. The dancers, who were of both sexes, smeared themselves with holy ashes and wore *rudraksha* bead garlands. Along with the *mridanga*, the *karata* (trumpet), the *kirikittaka* (which was synonymous with *sukti vadya*) was played to accompany the dance. It is described as a metal tube nearly eight centimeters across and about a little more than a meter in length with one end shaped like a serpent's hood. Its surface, cut into notches, was rubbed with a *kona* (a rod). The description in books and the visual illustrations in sculpture tally, but do not conform to the meaning of the name *sukti vadya*, *sukti* meaning a cowrie. But more often than not it is rare to see a cowrie in the examples and specimens that one comes across whether in texts, sculptures or actual instruments. However, the *raponi* of Assam is really a *sukti vadya*. It is simply a bamboo stick, not a tube, of a meter's length with serrations along it. This is held somewhat like the violin. In the same hand a cowrie is also clasped in the palm and moved up and down rapidly over the notches. Excellent sculptures of *kirikittaka* players can be seen in a number of Hoysala temples of Karnataka, of about the 13th century. Simpler rasps are found in the Ajanta and Ellora wall paintings and reliefs, which are datable between the 5th and 7th centuries A.D.

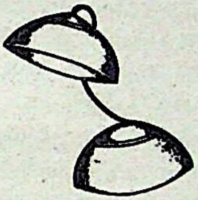
Plates of various shapes and sizes are very common as musical instruments, again in tribal and folk music. Except in the Kathakali band rarely are they ever used in sophisticated music; these instruments are also used in devotional singing. Here again there are many varieties though, they are all almost invariably made of bell metal which is a particular variety of bronze. The simplest ones are of course just plain metal discs beaten with sticks, held in the same hand or with the other hand. Examples of such instruments are the *thali* of north India, the *jagte* or *jagante* used by the *dasa (dasari)* mendicants of Karnataka and Andhra, the *chenkala* or *chennala* played in the Kathakali ensemble; the last is known as the *semmankalam* in Tamil. All those mentioned so far are just plain surfaces. But the *seemu* found in the north-eastern provinces is a large gong with a small boss (a convex bulge) at the centre. The instruments have a pair of holes pierced either at the circumference of the plate or on its raised rim and through these a thread is passed. This is held in the hand so that the plate hangs vertically and is beaten with a stick. Like the *seemu,* quite frequently *thalis* may have raised rims; these are really eating plates converted to musical instruments. Such *thalis* may merely be placed on the ground, with the rims touching it and struck with the hands. (4)

A folk instrument from Rajasthan, the *sree mandal,* has a number of plates tied on to a metal frame, the whole contraption being about a meter and a half in height. The plates being of varying thickness and diameters, they give out tones of the different pitches in a musical scale. One could even call it a "*thali tarang*", analogous to *kashta tarang, nal tarang* and so on. Strangely, a very similar instrument is known in China where it is called the *yun lo.*

The *chimta* seen in various parts of north India is a jingle johnny with small platelets. It is an iron fork, a meter long, on the arms of which are fixed loosely sets of small discs of brass. (*Chimta* literally means a pair of tongs). The instrument is shaken or beaten against the palm rhythmically in accompaniment to *bhajans,* folk songs and dances. (5)

You have only to give a plate a convex bend to make it a cymbal. And depending on the sizes and material there are innumerable varieties of these: from the midget *majira* or *jalra* of five centimeters diameter to the *bortal* of Assam measuring thirty centimeters across; these are made of bronze or brass. The concavity is also of varying degrees, from flat plate-like ones to deep bell shaped instruments. The names are equally numerous: *jalra, jhallari, kartal, tali, talam, elattalam, kuzhittalam,* are commonly applied to smaller types while the larger cymbals are called *jhanj, jhallari, bhrattalam, brahmatalam, bortal* and so on. The instrument is found everywhere in the country with itinerant singing parties, *harikatha* artistes (who tell the story of the Lord in song and tale), devotional congregations, dancers and beggers. As for history, the earliest known specimen is from the Indus excavations and the near contemporary *vedic* texts wherein the cymbal is referred to as the *aghati.* (6. 7)

Bells, of course, are as ubiquitous as cymbals and could well be thought of as deeper cymbals. The difference naturally lies in the mode of playing. Whereas it requires two cymbals to be clashed against each other—rim against rim, rim against a surface or flat surfaces of each piece—bells are single concave bodies shaken (with a beating tongue



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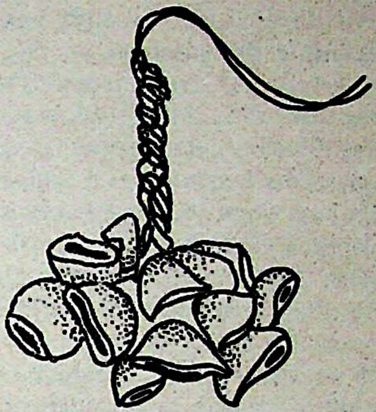

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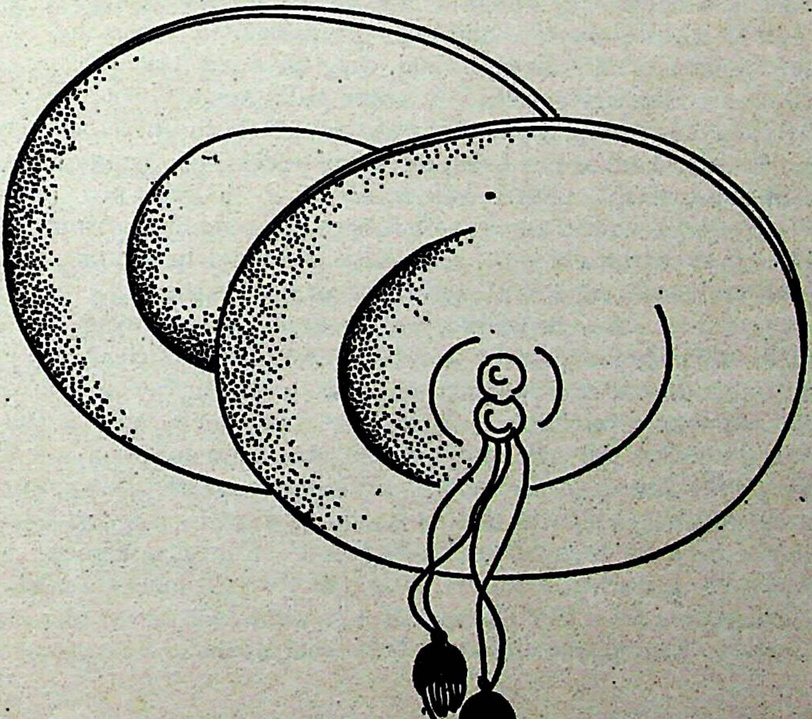
6. *Manjira* or *jalra*
7. *Bortal* or *brahmatal*
8. *Gilabada*

7



inside) or struck on the rim with a stick. There are some bells where the rim is stroked producing a continuous high pitched sound. It is quite possible that the first bell shaped instruments were dried fruit shells and floral buds. Seed rattles are used very often by tribal people: for example the *gilabada* of the Andhra Chenchus is one such instrument. It is a dried fruit and a few of them are tied together and shaken in rhythm. The Baigas of Madhya Pradesh tie a set of dried pumpkins to their waists when dancing. The pulp of the fruit having withered away, the seeds become loose and, when shaken, produce a beautiful sound like that of a rattle. The *kaniyari* fruit is used by the Oraons. Hundreds of dessicated shells of *kaniyari* or *champa* are tied to a long bamboo pole with feather decorations; this pole is stamped on the ground while dancing. One other folk rattle is the coconut shell into which a few seeds or stones are dropped and sealed. Usually a handle is also fixed to the coconut and shaken. All these primitive and natural rattles must have been the beginnings of more sophisticated metal and wooden ones commonly met with as children's toys such as the *jhunjuni*, *khul-khula*, *khunkhuna* and *gilki*. (8)

It does not require much imagination to see that by imitating these natural buds in metal we get bells. Ankle bells—the *ghungroo* of the north and the *gejje* of the south—have such bud-like shapes and the course of evolution is evident. Even bells used in worship at temples or by many folk dancers—particularly the devil dancers—are just metal cast in the shape of a flower, the tongue of the bell obviously suggested by the floral pistil. Because *ghungroos* and bells are difficult to make so that they produce definite pitches and qualities, they have not found an important part in our art music. Nevertheless, ankle bells are a 'must' for dancers and are symbols of their profession: almost totemistic in association. When a dancer makes his or her first professional debut, the tying of the *ghungroo* is an indispensable ceremony, referred to as the *gejje pooje* in the south.

While bells normally have not been accepted into serious music, there is one instrument which has this shape and is fairly popular, though mostly in 'orchestras', this is the *jala tarang*. It consists of a number of China bowls, the number depending on the notes to be played. These vary in thickness, height and width which determine the pitch of the bowls. Into each is poured a certain quantity of water to further adjust the pitch to the required exact value; hence the name *jala tarang* (*jala*=water, *tarang*=wave). The water-filled cups are arranged in a semicircle with the player sitting in the centre. He has one small bamboo stick in each hand and strikes out the melody by beating on the rims of the bowls. One cannot be very sure of the 'Indian-ness' of this instrument, as there is very little historical evidence. It is said that Alexander, on his way back to Macedonia from India, took with him some *jala tarang* players; this fact however, has to be substantiated. Vatsyayana's *Kamasutra* speaks of an *udaka vadya* (water instrument) which, according to some, might have been the *jala tarang*. Vatsyayana exhorts: "A female, therefore, should learn the Kama Shastra (The Art of Erotics), or at least a part of it, by studying its practice from some (confidential) friend. She should study alone in private the sixtyfour practices that form a part of the Kama Shastra". The sixtyfour accomplishments are known to most students of Indian art and the author lists the various accomplishments which include singing, playing on instruments, dancing, writing, drawing, tattooing, decorating the bed room, and so on. Among the arts, (besides the above) to be learnt along with diligent study of the *Kama Sutra* is "playing on glasses filled with water". This is, however, the translator's phrase and the original has no such statement, it only says *udaka vadya*. But the *Sangeeeta Parijata* of the 17th century and also Hindi poets of about a century earlier mention this instrument directly.

The earthen pot is an instrument which is popular both in folk as well as classical music. The folk varieties are made of clay or metal and go under names such as *matki*, *gagri* and *noot*. The last mentioned is found in the Kashmir valley as also in Sindh, and is indispensable in choruses and ensembles performing *cchakri*, *rauf*, *soofiyana kalam* and other music so typical of this part of the country. The *noot* is an earthen pot and is placed in front of the player on the ground or on the lap with the mouth up. The singer who uses the *noot* for rhythm, beats it on the mouth and the sides in simple but very attractive *tala*. The *ghatam*, often heard in Karnatak music concerts, is much like the *noot* but is an improvement made out of special clay, carefully kneaded and uniformly fired. The *ghatam* player sits on the floor with his shirt open; the mouth of the pot is held close to his stomach, the body of the instrument resting on the lap. It is never beaten on the mouth. Further, by manipulating his abdomen, the player can elicit various volumes and tonal colours out of the *ghatam*.

Throughout the descriptions so far, one fact may have been noticed: and that is, that the vast majority of *ghana vadya* finds a place in tribal and folk music and there are not many 'solid' instruments used in sophisticated concert music. Also, it would have been observed that few of them are melodic, most of them are rhythm keepers. This is not surprising, for Indian classical music demands a great accuracy in pitch which is almost impossible to obtain in these instruments. *Raga* music is not only enriched by, but has come to depend on ornamentations or *gamakas* which cannot be produced on *ghana vadya*. Melodic music, moreover, lives on long sustained notes which, again, are not obtainable on idiophones in general. Bound by these limitations they have therefore rarely made the grade.

IV

Drums

MEMBRANOPHONES are called *avanaddha vadya* in musical literature in India. *Avanaddha* means "to be covered"; therefore, an instrument wherein a vessel or a frame is covered with leather is an *avanaddha vadya*. While this is the usual term for drums, traditionally there is another, *pushkara*, which seems to have also meant drums in general. Bharata in his *Natya sastra* tells a tale of how these *pushkaras* came into being. According to the story, Svati, a great saint, went to a pond *(pushkara)* in his hermitage for a wash. When he was there Indra, the god, sent a downpour of heavy rain and the drops made sweet and rhythmic sound as they fell on the lotus *(pushkara)* leaves. The sage listened to the sound enthralled and came back to his hut with the music still ringing in his ears. He then had the various *pushkaras* such as the *panava* and the *dardura* made with the assistance of the heavenly craftsman, Visvakarma.

Whereas the *ghana vadya*, as we have seen earlier, have not attained the status of sophisticated concert instruments, drums, though strictly still only rhythmic, have come up in their own functional area to the same levels as wind and stringed instruments. This is because, the sound of a drum can be made definite, as in the *tabla* or the *mridanga;* it can also be varied in tone colour and pitch. Further, due to the longer duration of their sounds, they are more musical than idiophones. Nevertheless, the duration is not long enough nor is the pitch definite or precise enough for *avanaddha vadya* to have become melodic instruments. They have, hence, remained rhythmic instruments *par excellence.*

There are two crafts which have been associated with and have generally determined the evolution of drums. These are woodcraft and pottery. One of the earliest ways of making a drum was to fell a tree and scoop out the inside, thus obtaining an easily available hollow cylinder. This could be covered with skin on one or two sides producing a drum. Perhaps, the earliest of such instruments were very large and stood vertically on the ground like trees. This being the case, it is obvious that only the top face could have been covered. Such vertical drums are sometimes found with us even today, as the *ronza* or *runza* of Andhra Pradesh, though wood has been replaced by brass and the shape is more like a truncated cone. However, in Africa and Mexico as also with certain tribal populations elsewhere, cylindrical drums of wood have been discovered, where sometimes the length of the instrument may go upto three meters. Log drums like these, in our country, though not of such great dimensions nor kept on the floor and beaten, are the *kharram* of Assam and the *dhole* played by the Reddis of Andhra. In Kerala, for example, palm or coconut trees—in which this region abounds—are cut down, the trunk hollowed out and covered with leather. But with the development of mechanical aids like lathes, wood has been shaped into smaller vessels of different shapes as in the *tabla* and the *mridanga.*

Another direction of evolution in this class of instruments is the potter's craft. Earthenware, even without the wheel, has a versatility in shape and an amenability for working, which is difficult to obtain in wood. That is why mud vessels and pots of numerous forms are available. Early drums made of pottery therefore exhibit the same variety in shapes and sizes; spherical pots, shallow pans, long necked jars and so on. Until the advent of the lathe, woodcraft could not have achieved this fineness and uniformity in thickness and other dimensions which are possible with the potter's wheel and which are so necessary for the quality of a drum. Thus we see pots like the *dardura,* the panlike *tasha* and the jar shaped *tumbaknari.* Even the barrel form of the *mridanga* is easier moulded on the wheel than on the carpenter's bench. There is one drawback however, with earthen-ware: they are fragile. Drum-making, hence, reverts to wood and takes to metal. For example, while the *khole* is still made of clay, the *mridanga* and *pakhavaj* are constructed out of wood, though the word *mridanga* suggests a body of mud and clay; similarly, the earthen *dagga,* so common a few decades ago, is now made of wood or more usually of metal.

There is another aspect which is worth drawing attention to once more. This is, that drums in their primitive stages were cooking and storing pots which when covered become '*avanaddha*' *vadya.* This simple point is made evident in the names of a number of instruments of this kind. The best example one can cite is of names like *para, pare* and *pirai* etc. for drums, in Dravidian languages. But this word also refers to vessels employed for storing and measuring grain. Such functional and evolutionary relations are, therefore, very evident and do not need further labouring and elaboration.

There is one other type of membranophone which has completely disappeared from our musical world: the stamped pit. It comprises a deep hollow, dug in the ground and covered with thin planks or bark on which tribal women jumped keeping time to the music and dance. This 'earth drum' has been noticed in Indonesia, Malaysia and some far eastern countries. But *vedic* literature describes an instrument called the *bhoomi dundubhi*. This was a pit covered over with ox hide with the hairy surface facing up and nailed to the ground all around the pit; the 'drum stick' was the tail of the animal itself which was left intact. It is quite possible that such earthen drums were more primitive than the wooden cylindrical ones described earlier.

Drums have, for various reasons, always had symbolic and totemistic values. Quite a few tribes have special ceremonies related to them. Furer-Heimendorf who was working with the Reddis of Bison Hills in Andhra says that with these people drums were the only instruments the manufacture of which was accompanied by a ritual. "A Reddi when he has carved his drum shell and hollowed out the interior, stretches the membranes over the heads, kills a chicken and boring a hole in the shell with a red hot iron, pours a little blood into the shell, saying, "May this drum have a loud voice and sound ere we even touch it." The Oraons have certain ceremonies connected not only with the drum but other instruments as well. "When an Oraon purchases a new sword or shield or a new musical instrument, such as a *nagera* or *runj* drum or a *narsingha* pipe or bugle, he ceremoniously anoints it with vermillion. This is known as the 'marriage' (*benja*) of the shield or the drum or the bugle. These weapons and instruments are obviously recognised by the Oraons as mysterious living 'powers' with whom they enter into relation so as to make their '*mana*' (a mysterious impersonal force) propitious to themselves, or, at least, innocuous. The first use of such an object is supposed to be full of risks and has to be made with caution and appropriate ceremonies. Even a new cloth is by some Oraons besmeared with turmeric juice before it is worn; this too is known as 'marrying' the cloth." Such ritual connected with handselling is not confined only to tribals. Almost every Hindu applies a little turmeric or *kumkum* (vermillion) to a new *dhoti* or *sari* before first unfolding it for use. Even at the 'highest echeleons', the breaking of a coconut and garlanding of a vehicle or when inaugurating a railway line or launching a ship from the dock is practised; this perhaps is a residual memory of the rituals of animal sacrifices!

Vedic rituals also gave a prominent place to the drum, particularly the *dundubhi*. In the *Atharva veda* there is a fine eulogy to it; a part of the long invocation goes thus, "Oh *dundubhi*, you who are made of wood *(vanaspati)* and strident in sound act as a hero. By your high pitched sound strike terror in the enemies and, desirous of victory, roar like a lion. As a bull in rut amongst cows, so do you run amuck amongst the enemies.... The gods of battle have scared and defeated the enemies with the sounds of the *dundubhi* covered with deerskin." The drum was not only martial in use but was also of great significance in peace and religious rites. For instance, the *dundubhi* was played loudly to enthuse chariot racers; seventeen of them were kept round the holy arena and played during the *Vajapeya yajna* (ritual). The *dundubhi* players along with the flutist, *tala* clappers and other instrumentalists were considered sacred and 'sacrificed' in the Mahavrata ceremony of winter solstice, *Makara sankrant*. It is of course very questionable whether there was a physical sacrifice of human beings. The prevalance of human sacrifice during *vedic* times seems to be doubtful. The consensus of opinion of numerous scholars both in India and outside is that this reference to 'sacrifice' was really a symbolic statement of the offering of something sacred to the gods at the time of *yajnas*.

Some kind of worship of the drum has continued to much later times. For example, the *Natya sastra* describes how the various *mridangas* are to be worshipped: "under the asterism of *Chitra* or *Hasta* star, during an auspicious day of the waxing moon, a high born master of the arts who is free of passions, who knows music and its theory well, who is properly cleansed for worship should make three *manadalas* (circular places) washed with cowdung. He should place the *alingya* in the *mandala* of Brahman, the *oordhvaka* in that of Rudra and *ankika* in the place dedicated to Vishnu. To the first should be given an offering of honey, porridge and flowers; to the *ankika* should be given an offering of *apupa* (unleavened sweetened wheat cake) and *lochika* (a pastry of flour, *puri*), to the *oordhvaka* should be offered *apupa*, *pinda* (a ball of food) and so on. The offering should be decorated with flowers of *dhustura* (datura) and *karaveera* (oleander) along with a red cloth."

To the Hindu mind the *damaru* has inextricably esoteric associations with the Cosmic Dancer, Siva. As an ancient text says, "At the end of the dance the Eternal Dancer, to elevate as also to protect Sanaka and other *yogins* and to manifest his unmanifest Form, sounded his *dhakka* (a variety of *damaru*), nine and five times. Out of this came the fourteen aphorisms of language and speech which encompassed all tones of music as well". The sound of the *damaru* is then a symbol of the 'Primeval Vibration' which refers to both creation and annihilation, and so finds a central position in many a *tantric* text.

In the above, description of a ritual for three different kinds of drums, differentiated by the way they were held was given, *a la* Bharata and we may acquaint ourselves with some words used there. The *oordhvaka* drums were positioned vertically and were perhaps played only on the top face (if the instruments were stood upright while playing, there could be only the top surface available for striking). Today we have the *chenda*, the *tabla* and a few others which have this position of play. The *ankya* type were kept horizontal and struck, the current examples being the *dholak*, the *mridanga*, the *khole* and so on. The *alingya* drums were embraced, meaning perhaps that they were held under one arm and played with the other. Some scholars are of the opinion, however, that these were really descriptions not of different kinds of drums but the positions of a three-piece *mridanga:* that is, in those days *mridanga* might have referred collectively to three barrel drums and the terms used above indicated how each unit was kept. There are sculptures and reliefs which show one instrumentalist playing three drums, but usually they show a pair standing and one horizontal.

There was another classification based on shape. The *haritaki* kind were myrobolan-like: that is, with a barrel that had a central bulge and a fairly uniform slope towards each face, somewhat like the *tavil* found in south India today. The *yava* or barley shaped drums were also barrel drums and they may have been similar to the present day *mridanga*. The *gopuccha* or cow's tail described was most probably one which was broad at one end and much narrower at the other, like the *khole* of Bengal.

For our present purpose we may divide *avanaddha vadya* into struck and rubbed ones; under each of these classes we may include subclasses such as frame drums, vessels of different shapes and varying number of faces, and so on, though rubbed drums are fewer in variety. Better known examples of these now follow.

The frame drum is one where the skin is stretched over a frame of wood or metal. In effect, in such instruments, the diameter is very much longer than the depth. The hide might, naturally, cover either one or both the sides of the frame.

The simplest of such drums are the *soorya pirai*, also called the *soorya mandalam* and the *chandra pirai* or the *chandra mandalam;* both are found in Andhra and Tamil Nadu. The '*pirai*' in the two names means 'drum'; the *soorya* and *chandra* indicate the shape: *soorya pirai* is completely circular and the *chandra pirai* is crescent shaped. These *pirais*, about twentyfive centimeters in diameter, consist of an iron rod bent in the form of a circle or a crescent across which is stretched specially treated hide. The frame bears a handle and to its farthest end is attached a curved band, also of iron. This band is tied round the forehead of the player who strikes the instrument on both sides of the membrane with small sticks. (9)

The most ubiquitous drum of this class is the *daff*. The sizes, the shapes, the construction and, of course, the names vary from region to region. But in general they all comprise a wooden or metal strip which is bent round to form a circle; sometimes the shape may be even octagonal, as in the case of the *ghera* of Rajasthan, and primitive instruments may have no shape in particular, though vaguely circular or elliptical. Even the manner in which the hide is fixed differs from place to place and from type to type. For example, in the *chengu of* Orissa the skin is just crudely nailed to the frame by means of wooden pins. Some kinds of *daff*, like those seen in Karnataka and many other areas as well, use a complicated system of threads and rings to fix the membrane. Usually, however, the leather passes uniformly over the wooden strip and is nailed to it by small metal nails placed closely at regular intervals. The instrument is commonly suspended from the neck, held vertically and beaten with the hands or small straight sticks. The *daff* family is a tribal and folk one, never used in sophisticated concert music. The drum is known by different names, the most common of these being *daff*. Variations of this word are *dappu, dafli* and so on; in Tamil it even gets modified to *tep*. Obviously all these are linguistically related to the Arabic *daff*. There is another set of names used in south India and these are *tammate* or *tappate* in Kannada, *tammattai* or *tappattai* in Tamil, and *tammeta* or *tappeta* in Telugu. Some scholars have drawn attention to the great similarity between these words and the ancient Egyptian one, *timibittu*, suggesting that it might have been brought from Egypt to the peninsula and to Sri Lanka where it is called *tammitemma*. In Maharashtra and Karnataka it is also known as the *halige*. Now, *halige* in Kannada means a plank and hence a flat surface; by an extension of meaning, an instrument with a wide flat surface for playing, might have received the appellation *halige*. According to some, the ancient Sanskrit name for the frame drum was *pataha*, a word found in the *Mahabharata* and the *Natya sastra*. However, medieval writers on music used the word most probably to mean a barrel drum. Other names for this class of instruments are *dayara, chang, karachakra* and so on. As for sculptural evidence, the earliest in all probability is from Bharhut reliefs of the pre-Christian eras. The relief of a large medallion shows a procession of monkeys and an elephant. In all there are eight monkeys, five of them riding on a elephant, perched all over the animal's back. Three monkeys are shown roaming on the ground playing musical instruments. One is beating an hourglass drum slung from the shoulders; the second is striking what looks like a large *daff* with a stick bent at the striking end, and the third is blowing a trumpet which has a long straight tube ending in a conch shaped flare. **(10)**

A frame drum similar to the *daff* but smaller in size is the *khanjari*. The *khanjari* has a frame, nearly thirty centimeters in diameter, made of wood brass or even iron, and is covered with parchment; the instrument is beaten with the hands using the palms and fingers. It is not just the difference in dimensions between the *daff* and the *khanjari* which is

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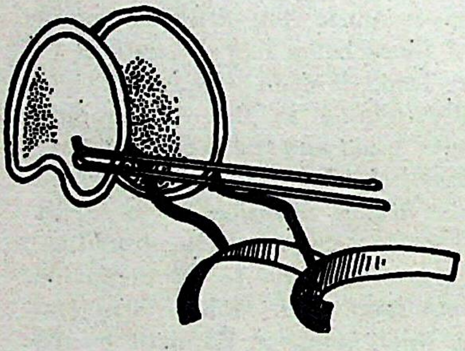
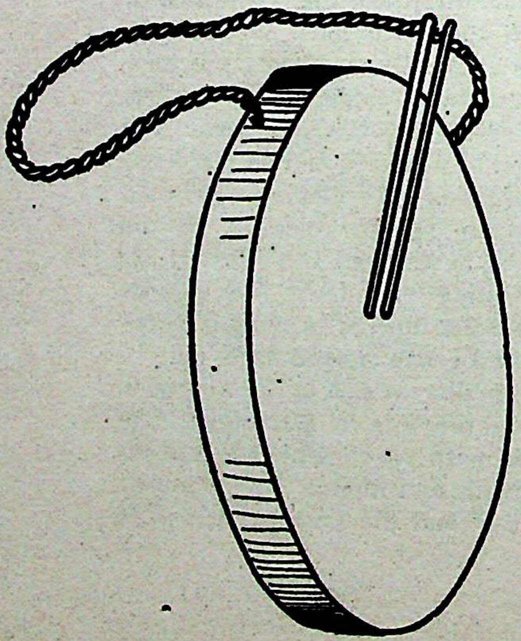


9. *Chandrapirai* and *sooryapirai*
10. *Daff* or *tammatte*
11. *Gna*



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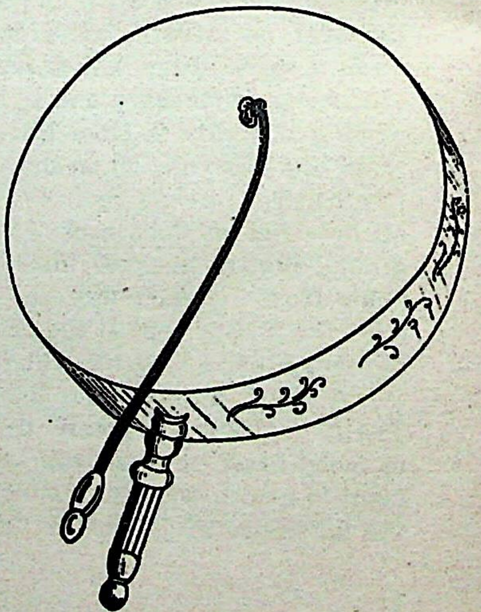

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notable; the essential dissimilarity is that the latter bears sets of small brass platelets, fixed loosely in pairs which produce a pleasant tinkle while playing. This instrument is also a folk instrument, usually associated in the west with gypsies and known as the tambourine; it has, however, been mentioned by Hindi poets of the 'middle' ages.

A third type in this group—though without the jingle plates—is even smaller, though called *khanjari* in the north; this is the *kanjira* of the south. Approximately a span across, it is held in one hand and played with the other. In north India it is a folk instrument, whereas in the peninsula it is a concert drum almost as versatile as the *ghatam*. During a concert with capable accompanists, the principal soloist, whether he is a vocalist or an instrumentalist, gives an opportunity to the rhythmic ensemble. This part of the performance is known as the *tani avartanam* or *tani* for short and is the time for the players of the *mridangam*, the *kanjira* and the *ghatam* to exhibit their skill. The *mridangam* is considered the leader and he starts off a rhythmic pattern: the other two—*ghatam* and the *kanjira*—follow this pattern in their turn; there is a sort of a finale in which all the three join and thus comes to an end the *tani*. Sometimes the *moorsing* also joins this group, though we are slowly losing competent players on the *moorsing* with the capacity to elicit the finer time divisions so characteristic of Indian music.

The *daff* and the *khanjari* are made of sheep, goat, ox or buffaloe hide; but the *kanjira* (and even the smaller *khanjari*) use the skin of iguana, a kind of lizard. Since the leather is fixed tightly to the frame even while making the instrument and there is no provision for tuning, these drums are not amenable to finer tuning. More recently screws are being used for fixing the parchment—a technique borrowed from the West; with such *daffs* finer pitch adjustments are possible, though not to the extent it is in the *tabla* or the *mridanga*. Usually when the player finds the hide taut he dampens its hind surface thus lowering its pitch to the desired level by loosening it. When it is slightly loose, as it often is in the rainy season, he warms it over a fire.

The frame drums described so far had only one beaten surface. But there are a few drums which have depths of negligible dimensions compared to their diameters, but with two faces. Some typical ones of this kind are the *murichenda* of Kerala, and the *chadchadi* of Orissa. The best example is the *gna* of Laddakh and adjoining areas. This has a frame like the *daff*, though extremely well decorated with ritualistic motifs in coloured lacquer—a fine specimen of such handicraft. The *gna* is covered on both sides and there is a longish handle to hold it. It is beaten with a stick with a characteristic curvature. This is the smaller variety; there are big ones called the *gna chen* whch are hung on frames and struck with sticks. These and other drums are very closely associated with *tantric* rites in Buddhist areas where the flat drums are played to propitiate both the kinder dieties as well as the 'angry guardians of faith'. Drums and other instruments play an important part in the Lamaistic dances of the Sherpas, the highlanders of Laddakh, Bhutan, Nepal and Tibet. Of special interest is the *gna-cham* dance performance. Four dancers do the dance, one pair playing the drums, *gna* and the others cymbals. These beats symbolise "the eternal beat of the heavenly drum which vibrates in the world as life and death vibrate". The drum sounds signify the "expounding and transmitting of the truth on the wave-length of universe", as revealed to Gautama. This may be compared to the mystic sound of the *damaru* of Siva. The *gna* is also used for purposes of divination of illness, its cause and cure. **(11)**

As was suggested earlier it is very probable that large wooden cylindrical drums might have well been the earliest two-faced *avanaddha vadya*. The reasons for this were also pointed out: that it is easy to fell a tree, cut the trunk to the required size, hollow it out and cover it with leather and thus make a drum. Even today large instruments of this kind are found in various areas with a number of tribes and rural groups. The *kharram* of Assam, the large *dhole* of the Andhra Reddis and *dhole* of the Dhangars of Maharashtra are all huge wooden drums played to their dancers. Such a '*dhole*' can be seen on a seal of the Indus valley and hence must have existed in this subcontinent from prehistoric times. The scene on the seal depicts a man with a long cylindrical drum, held horizontally near about the waist; he is standing in front of a cow or an ox and beating the instrument with his hands.

No description of the cylindrical type of drums can begin with a better example than the *bheri*. This is one of most ancient drums we know of. It must have had a very loud and strident tone, for it was of common use in battles, processions and merrymaking. The *Ramayana* has a number of references to it. When Hanuman is caught and punished by Ravana, the king's orders are announced to the sound of the conch and the *bheri*. When Rama and Lakshmana awaken from the soporific influence of the enemy's arrow, the joyous occasion is celebrated with the music of the ***bheri*, *mridanga*** and ***sankha*.** The battle cry and the drum beating to enthuse soldiers and to frighten the enemy used, among many other percussion instruments, the ***bheri*,** as is often described in the ***Mahabharata*.** One *Jataka* (the story of the life cycles of the Bodhisatva), the ***Bheri vada jataka*,** is a short one describing a very good use of this instrument. The story goes thus: "Once the Bodhisatva was born in a village near Varanasi and there plied the profession of a drummer. He made his way to that city to earn some money at the festival; and with him went his son. The two started on their way back after a good earning at the fair, and their way led through a forest where dwelt many robbers. To frighten away the robbers the son began to beat the *bheri* incessantly. The father chided him saying, 'Don't behave so. You must beat the drum only now and then, as if the procession of a great lord was passing by'. The son would not heed the advice but went on with his noisy warnings. At first the marauders ran away, thinking that it was a great lord passing by along with his retinue. But when the drumming did not stop they came to find only the old man and his son going. So they fell upon the two and looted them of all the money they had earned." The moral of the story:

> "Go not too far, but learn excess to shun;
> For over-drumming lost what drumming won".

The *Sangeeta ratnakara* written in the 13th century and considered one of the greatest works on music gives a short description of the *bheri*: the drum was made of copper, was sixtyfive centimeters long and each face had a diameter of twentyfive centimeters. One face was played with the hand and the other with a *kona*. There were a variety of *bheris* like the *rana bheri* used in war, the *ananda bheri* used by *gopis* (milk maids) in their dances and accompanying the singing of *dhamar*, the *madana bheri* and so on.

Today cylindrical drums of different sizes and held in various positions are common throughout the country and are comprehensively called *dhole* when large or *dholak* when small. (These words are applied also to barrel drums). One interesting variety, generally seen in Andhra and Tamil Nadu, is the *pamba* or *pambai*, a folk musical instrument. As a matter of fact there is a community in southern Andhra who specialize in playing this instrument; this social group call themselves the Pambalas and have an interesting status *vis a vis* the orthodox Hindu classes and the 'untouchables'. The *pambai* is not one drum, but in reality a *pair* of long cylindrical or near cylindrical ones, tied together. The unit of two is held near the waist of the player and beaten with curved sticks. In the simpler varieties, both drums are made of wood. But one often meets *pambai* in which one drum is of wood and the other of metal, usually brass. The two constituents are distinguished by giving them different names: the wooden one is known as *veeru vanam* and the metal drum as the *vengala pambai*, (*vengalam* means brass). Of course, *pambai* includes both and is a collective term. **(12)**

Of all cylindrical drums none is so well known as the *chenda* of Kerala. This is an instrument seen invariably in *kathakali*, *koodiyattam* and related forms of dance. The same instrument is known as the *chende* in certain areas of Karnataka where it is an accompaniment in the *yaksha gana* dance-dramas. The drum is cylindrical in shape, made of jack wood and covered at both ends. While it is thus bifacial, in actual practice only one surface is beaten. To do this the drummer suspends the *chenda* from his neck such that it hangs more or less vertically and he strikes the upper parchment with a pair of sticks. There are many kinds of this drum: the *uruttu chenda* (for playing variations), the *veekku chenda* (one which beats the basic rhythm), *acchan chenda* and so on. It is interesting to come across a similar instrument in sculptures as old as those of Sanchi. Here a band of foreign soldiers are shown marching and one of them is a drummer who is playing an instrument very much like the *chenda*.

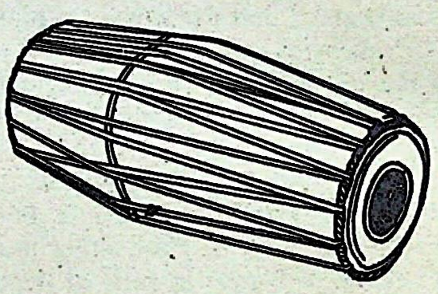
Bulging drums—what are also often called as the barrel drums—are very ancient indeed. Some *grhya sootras* give the *mridanga* and another *avanaddha vadya*, the *nandiriti*, which according to some scholars was a kind of *dhole*. In old Tamil literature also one comes across the *murasu* quite often. The epics, *Ramayana* and *Mahabharata* are copious in their mention of the *mridanga*, the *pataha*, the *nandi vadya* and such other barrel drums. These were not only martial in use, but were also employed in merrymaking and festivals. In the *Ramayana*, Valmiki describes the rainy season thus: "The buzz of *bhramara* is the hum of strings, the chatter of monkeys the rhythm, the tree tops sing in the wind and the dark clouds play the *mridanga*". A few *jatakas* also refer to the *mridanga* and the *muraja*. And Jain literature also has extensive references to certain bulging drums. Harivamsa, which is a 'supplementary' to the *Mahabharata*, describes a group song called *cchalikya* in which Narada played the *veena*, Krishna was the flutist and Arjuna gave *tala* on the *mridanga*. Kalidasa in his *Raghuvamsa* describes the frolics of women bathing and splashing in the river: "The charming *mridanga*-like sound of the waters accompanies their songs and fills their ears as it is welcomed by the sweet cries of peacocks standing on the bank, their tails expanded". In the *Srimad Bhagavata puranam*, there is passage on the ascent of Prince Dhruva: "The time of Liberation had come for Dhruva, the son of Uttanapada. Perceiving this, he stepped on the head of Death and mounted the divine chariot. Heavenly beings then struck the *dundhubi*, the *mridanga* and the *panava; gandharvas* sang his praises and there was a shower of flowers from the skies" Sculptural depictions of barrel drums begin at least two millennia ago in the reliefs of Bharhut and Sanchi.

We have once again to fall back on the *Natya sastra* for the earliest musical text describing the *mridanga* and allied drums. During his time and thereafter this instrument, in some form or the other, has been the premier drum of India; every age and every system of music has given it the highest place of honour. Bharata enumerates many types of *pushkara* of which *mridanga* was one, and describes various kinds of the drum differing in shape and position of play to which we have already referred. *(Pushkara* seems to have meant drums in general and included many varieties of *avanaddha vadya*). *Mridanga* also went by other names in musical and other literature: *muraja* and *mardala*, for instance. The difference between them is not always clear, though they were all bifacial, and most often bulging, drums. One medieval author gives details of *mardala* as follows: it had a body made of wood, about forty centimeters long, with a bulge in the middle; one face measured about twentyeight centimeters across and the other nearly twentyfive. Both faces had a paste of cooked rice mixed with ashes stuck on to them. The dimensions of the many other kinds of *mridanga* have also been given by ancient authors.

The *muraja* seems to have had a shape similar to the *mridanga* and the *mardala*, but with the heads (beaten surfaces) much smaller. Besides Sanskrit texts, Tamil literature of the Sangam age has references to many kinds of *murasu*, as for example the *veera murasu* (a martial drum), the *tyaga murasu* (a drum beaten to announce a charity or grant) and so on. The *muraja* evidently migrated to Indonesia where it was known as the *murava*.

Even in contemporary times we now use the term *mridanga* to mean many kinds of two-headed drums. For example, the *mridangam* of south India, the *pakhavaj* of Hindustani music, the *khole* of Bengal and so on are all called *mridanga* in spite of the dissimilarity in shape and structure. A parallel situation of confusion of names exists in the case of *maddalaṁ* which is related to the *mardala*.

The *mridangam* of the south is the only drum used in classical musical concerts there now, with the exception of the *tavil* which accompanies *nagasvaram* recitals. A generation ago even the *dholak* was played, though not frequently, in serious music; but one never comes across this in classical music now. Another instrument is the *suddha maddalam* which resembles the *mridangam* but is played with dances such as the *kathakali*. To avoid confusion and distinguish instruments of this class from one another, we shall use the word *mridangam* to refer only to the bifacial, barrel *avanaddha vadya* of Karnatak music, to be described now. The body or shell of the instrument is of wood and about sixty centimeters in length. The shape, as is obvious from the context, is that of a barrel with the bulge slightly to one side. The right face is slightly smaller than the left and even the construction of the heads differ. The left face, called the *toppi*, is simpler having two lamina. The outer one is really a flat ring of leather and at its periphery attached to a plait known as the *pinnal*. This layer holds on its inner side another parchment which is a circular piece and has a diameter approximating to the outer skin. This whole unit is fixed to the left head. The right face is more complex, as this has not two but three laminations. The inner one which is not visible to the eye and the outer are rings, as with the left face. Between the two is stuck one complete piece extending over the full face; that is, this middle circular layer is held taut by pasting along its periphery the annular rings of leather. This entire complex, called the *valan talai* in



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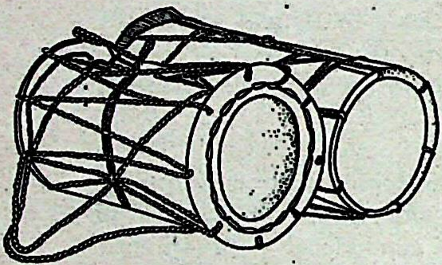

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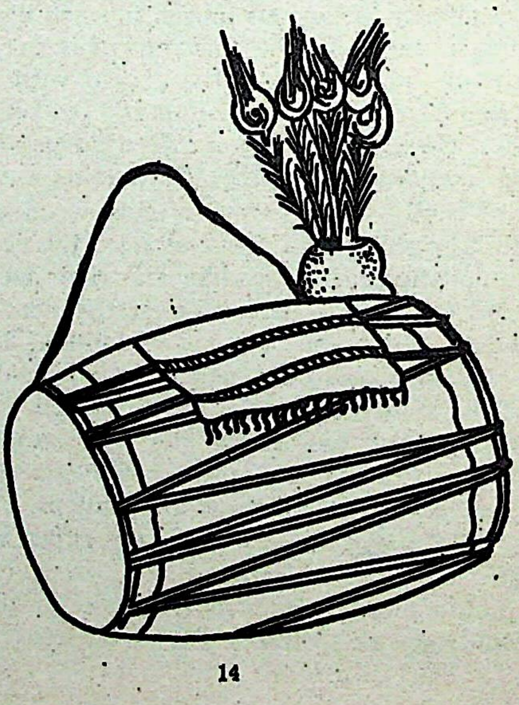

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12. *Pambai*
13. *Mrdangam*
14. *Tribal dhole*

Tamil, is stitched on to a *pinnal* or plait and mounted onto the right mouth of the barrel. The two faces—*toppi* on the left and the *valan talai* on the right—are joined and held together tight by leather straps which pass in and out of the *pinnals* or braids on both sides. The right drumhead has a black mixture known as the *soru* glued permanently on; the *toppi*, on the other hand, is a plain membrane which, just prior to use, is loaded in the centre with paste of dough; this is removed after the performance. Tuning of the drum is done by striking the right *pinnal* with a wooden block and a stone. (13)

The *pakhavaj* is the king of drums in Hindustani music, though today it is more a constitutional monarch, respected from a distance. Once it was truly royal, reigning the kingdom of drums and was played as accompaniment to *kathak* dance, devotional songs, *dhrupad* and *been* (*veena*). Times have changed today, for *khyal* singing and the *sitar* hold court; and so the *tabla* with its soft sound has taken over. As the tonal quality of the *pakhavaj* is deep and mellow suited to the *dhrupad* and the *been* and the strokes—*thapi* in musical parlance—have an elephantine gait in consonance with the older music, it could not accommodate itself to the present mood of the *khyal* and the *sitar*. This drum, like the *mridangam*, has a body of wood, though a little longer; the membranes are also multiple, but slightly different in dimensions. As is in the southern barrel drum, here also there is a black mixture, called the *syahi*, applied to the right face; the application of dough to the left head is again as in the *mridangam*. One general difference, apart from shape and size, between the two drums is that in the *pakhavaj* there are cylindrical wooden blocks under alternate pairs of laces; these can be moved up or down the barrel for gross tuning. Finer pitch adjustments are brought about by striking the plaits, which in Hindi are called *gajra*, by a metallic hammer. The *pakhavaj*, as *pakhavaj*, gets an early reference most probably in the Hindi literature of about five hundred years ago. It is one of the important drums described in the *Ain-i-Akbari* of Abul Fazl, a minister and friend of Emperor Akbar. Evidently, as either the *pakhavaj* or the *mridanga*, it has a historic past and might have had a number of regional variations in structure and style of playing. Today the major *gharanas* or schools of *pakhavaj* playing are of Kudau Singh of the nineteenth century, of Nana Panse of the same time and that of Nath Dwara in Rajasthan; this, of course, does not disregard the many great artistes who have been exponents of this instrument and who have developed individual styles of their own.

There are two more drums of this class which draw our attention. They are the *Sri khole* of Bengal and the *pung* of Manipur. The *keertan* or *sankeertan* is an extremely important congregational singing in the eastern parts of our country and Sri Chaitanya Mahaprabhu, the Bengali saint of the fifteenth-sixteenth centuries, is said to have popularized this kind of group singing. From Bengal it seems to have travelled further east to Assam and Manipur, as also to Orissa. And along with the *keertan* might have gone the *khole* or its varieties. Indeed, the association of this drum with the *keertan* and *bhakti* (adoration) is so deep that it is called *Sri khole.* While there are variations in sizes, the drum is usually about three quarters of a meter in length with one face very much wider than the other, aptly deserving the description *gopuccha* (cow's tail). The body could be of wood or burnt clay with the two heads made of multiple membranes as in the *mridang.* The *pung* used in Manipur's dance and music is smaller than the *Sri khole.* Also its bulge is more central and the shape more symmetrical than in the case of the *khole*; it might hence qualify for a description as *yava* (barley) shaped. Both the drums are beaten with the hands.

The *tavil* of south India is another *avanaddha vadhya* deserving mention. This is typically, and most likely exclusively, met within the *nagasvaram* or *melam* ensembles. As with the *mridangam,* the instrument is in the form of a barrel, but more so, and could be called as the *haritaki* (myrobolan) type. The *tavil,* like the other drums described, is also of wood though shorter in length, with the membranes almost of the same size. The parchments are fixed to rings—one for each side—and these are held together by leather lacing. The player beats on one side with a stick and on the other side with his fingers. The striking is so hard and forceful that, to produce the desired effect and to protect the fingers, special bandages are wound round the tips of fingers.

We have been talking of the *dholak* and the *dhole* quite often without actually describing them. This is because the number of varieties which are covered by the two words is enormous. The only common feature amongst these is that they are all two-headed drums. It is usual to call the larger drums as *dhole* or *dhak* and the smaller ones as *dholak.* The sizes may vary from the huge *dhaks* of Bengal to the small *dholaks* of itinerent beggars and drums beaten by ladies in marriages. The shapes also differ from the almost cylindrical to the barrel. The manner of stretching the hide over the mouths and lacing also varies. The drum face may be plain or may be loaded from the inside with the pulp of, say, castor seeds after the extraction of oil. *Dholes* and *dholaks* are suspended from the neck, tied to the waist and kept on the lap or the ground, and played with the hands or with sticks. (14)

The third class of bifacial *avanaddha vadya* are the waisted ones, also called the hourglass, sandglass or the *damaru* shaped drums. This form has an ancient past and once was a major instrument in sophisticated music. Today, however, one hears them only in tribal and folk music not on the concert platform. Right from Mohenjodaro we can trace the hourglass drum's occurrence and every age has depicted it in sculpture, in icons and in painting. The *panava* is as old as the *sootra* literature and the epics, the *Ramayana* and the *Mahabharata*. The *dindima* is found in the *Jatakas* as well as the great epics. Tamil classics have the *utukkai, itakkai, timilai* and so on which can be seen in use even now. Another drum belonging to this class is the *auz* which word, according to some, is derived from the Sanskrit *atodya* meaning instruments in general. This particular drum was known at least from the time of the *Sangeeta ratnakara* written in the thirteenth century and later described also in the *Ain-i-Akbari*. Other waisted drums of India, past and present, are the *hudukka*, the *deru*, the *dhakka* or *dhanka*, *trivali*, the *budbudke* or *kudukuduppe*, the *tudi* and a host of them found scattered in the land. These instruments differ from one another in the manner of playing, size and structure, though, in some cases, the same drum is known in different regions by local names. A few examples may now be studied.

Budbudke or *kudukuduppe* are the southern names for the diminutive *damaru* used by the monkey man throughout India: the monkey and bear dancers in the north belong to a special community called the *madari*. This is a very small drum, sometimes measuring as little as a few centimeters in length. The body, which is waisted, is of wood and bears two parchments, one on each side and are held together by moderately thick cotton threads. At the waist there are two strings with knots at their ends. On twirling or shaking the *damaru* these knots beat on the skins and produce a rattling sound to the rhythm of the *madari's* song and recitation to which the monkey or the bear dances.

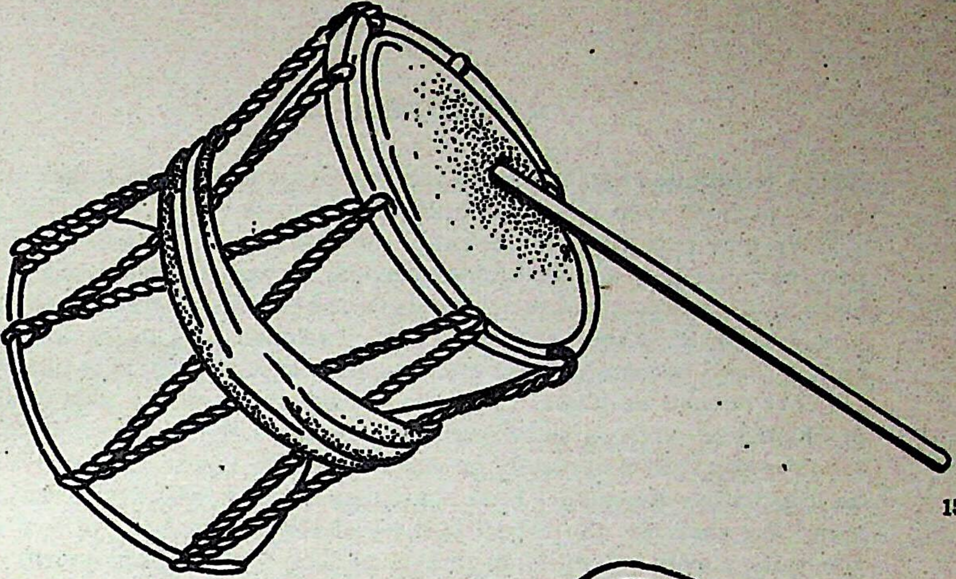
The *damaru* of Tibet and its neighbouring areas is of great interest, both for their structure and for the occasions on which they are performed. The drum, of which there are different kinds, is played in the musical ensembles in honour of the *dharmapalas* ("the protectors of the religious laws") both of the gentle and the aggressive or militant types; it is also used to show intervals and pauses in religious ceremonies. These hourglass drums, locally known as the *nga chung*, are made of sandal or catechu wood and may be, in size, anywhere from ten centimeters to much larger dimensions. They can easily be made out by the leather thong or the thick cloth wound round near the drum-waist which serves as the handle and by the attractive coloured pendants. While the *nga chung* and the *mchod nga* used by wandering monks are common, there is also the fantastic *thod nga*. This is made of two human skulls joined back to back; human skin is employed for the *damaru* faces. The skulls of people who died in an accident or of young children begotten of incest are considered of high magical value.

The *hurukka* (*hudukka, deru, udukkai*) is another type, though in shape it is of the *damaru* class; the size, on the other hand, is usually bigger, sometimes nearly twentyfive centimeters in length. The parchment is plain and is attached to a wooden body more or less as in the *damaru*. However, there are no knotted threads and hence this is not a rattle drum; the heads are struck with sticks or with the fingers. **(15)**

Tudi is a small hourglass drum played with song and dance in the villages of Karnataka and Kerala. In the latter province there was a curious use of this instrument; to catch thieves. When in a village a theft had taken place and the culprit was not traceable it was custom to depend on the services of a *tudi* player. He would take his place in the village square with the entire population round him. When all had gathered, he would play the *tudi* and along with it start on a really intolerable string of abuses calling upon the thief to confess. The vituperation would be so strong and vulgar that the miscreant would have to counter him either with a confession or an agressive attack. In either case he got caught.

Before going on to describe the *idakka* which is perhaps the most complicated instrument in this group, we must take a brief look into the technique of tonal variations obtained in such drums. A reference to the cotton braces connecting the two drum-faces was made while describing the *budbudke*. This lacing is always slightly lifted away from the shell of the instrument, which simple fact makes it possible for the player to press the threads to varying degrees. The change in tension so achieved alters the pitch of the parchments and very attractive tonal effects can thus be produced.

The art of fixing the parchment and playing in this special manner has been carried to a great degree of sophistication and complexity in the *idakka* or *eddakka* of Kerala. This instrument is, of course, neither recent nor confined to this province, for a large number of sculptures in many parts of the country, but more particularly in Karnataka, bear testimony to its wide distribution; and these sculptures are centuries old. Currently it is in Kerala that we see it most and at its best; it is also there that it has been developed to a high degree of sensitivity. The body of the *idakka* is of wood and is about a quarter of a meter long. The skin is stretched across a circular metal ring like in the *chandra pirai* and placed against the drum mouth, one on each side. The mouth itself has two thin midribs of coconut palm nailed across it and they add a pleasing buzz to the sound. The fact to be noted is that the heads are only held tight against the shell by cotton laces connecting them and the parchments are not permanently fixed to the wood; this enables the drummer to slide the body against the membranes to some extent. The cotton threads connecting the drum faces are wound over by another lacing at the middle narrow part of the body. This is also connected to the shoulder strap from which the instrument hangs. The player now employs a well practised manipulation of the drum. While beating it with a stick in one hand, the other hand is inserted under the threads. Here he squeezes the centrally wound lacing, moves the body of the *idakka* ever so slightly and applies small changing tensions on the shoulder strap. All these are done so delicately, dextrously and quickly that you do not notice them. Nevertheless,



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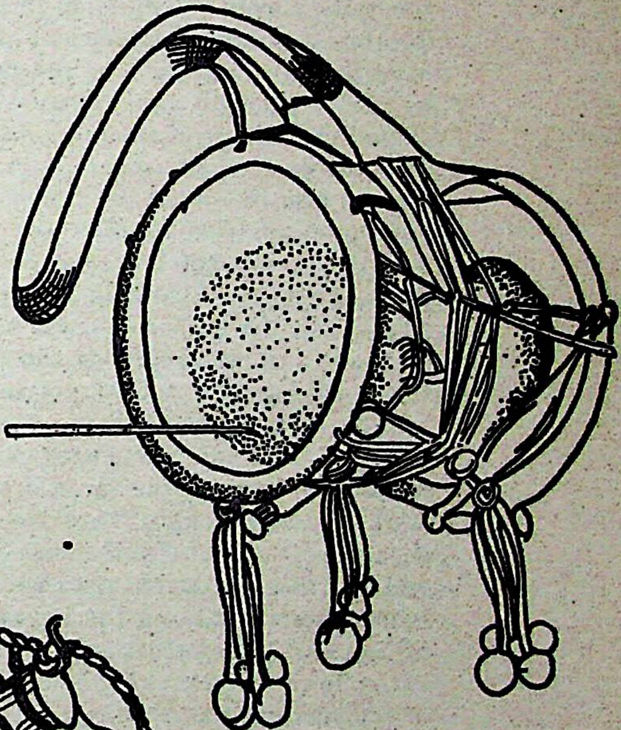

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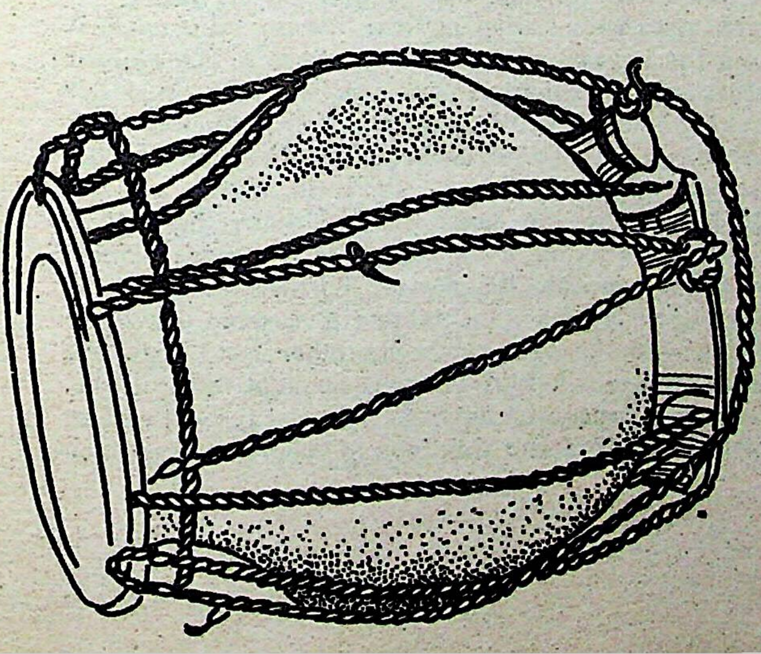
15. *Hudakka*

16. *Idakka*

17. *Burra, gummati* or *ghumat*



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such a technique enables him to create a great number of sound qualities and sometimes even play *ragas*, although a little out of tune. (16)

We may now turn our attention to *avanaddha vadya* derivable from pots, pans, troughs and such other vessels. As was suggested earlier, these household utensils might well have been the parents of all later pot drums. The variety of shapes and sizes also developed *pari passu* the potter's craft, as will become evident from what follows. Again, it is quite possible that *bhoomi dundubhi* might have vaguely given the idea of the use of *bhanda* or pitchers as resonators to increase the loudness of sound.

The simplest is naturally an earthen pot the mouth of which is bound with a leather covering. Quite a number of such folk drums are in use today, for example, the *pabuji ki mate* of Rajasthan. A set of *two* pots is generally played, which is an important fact, for the employment of two (or three) drums is an ancient practice in our country and might well have led to the growth of the *tabla* and the *dagga*. Each of these is a large clay pot with a membrane stretched over a wide mouth. The temple at Pattadakallu in Karnataka, dated from the 5th to 7th century is perhaps the earliest site where such a pot drum is shown. There is another temple, also in Karnataka where there is a relief showing not one drum but three pots tied together and played with the hands. In musical and other texts, this pot-drum has been known as the *dardura* and is as ancient as the first millennium before Christ. During Bharata's time—that is, 200 B.C. at the earliest—it was a prominent percussion instrument, as he classes it with the *mridanga* and the *panava*. But in later times it receded to the background and at present is a primitive folk instrument.

There is another shape: that of the *kooja* or the *surahi*, with a spherical body and a long neck made famous both in Persian and in Indian miniatures as the wine jar and also in Aesop's fables in the tale of the stork and the jackal. There are number of such pots differing in size, shape and material. *Tumbaknari* of Kashmir is a large *surahi*, the 'upper' end of which is covered over with leather and the 'lower' end is open; it is held horizontally on the lap and played with the fingers. The *ghumat* of Goa and Maharashtra in more spherical with a shorter neck; in this it is the 'lower' side that has a large opening stretched over with skin, often of iguana, and the mouth of the neck is uncovered. Very much like the *ghumat* are the *gummate* of Karnataka, the *burra* of Andhra and the *jamukku* of Tamil Nadu, but they are better made. Usually the body is of bell metal or brass and the fixing of the leather is also more complicated than in the *tumbaknari* or even the *ghumat*. Further, except in the *tumbaknari*, the open orifice is used for obtaining fine sound effects by pressing and opening it with the palm while the other hand beats the drum head. All of these are again folk instruments, some of them of considerable importance. For instance, the *burra* is a speciality of a certain group of ballad singers in Andhra and this type of song-story rendition is called the *burra katha,* as the singer accompanies himself on the instrument. (17)

There is a large class of *avanaddha vadya* derivable from shallow pans of various sizes and depths as well as from large or small conical vessels. The gradations in forms and dimensions are many and it may not be very pertinent in a book of this kind to go into finer classifications. We shall group them all as one whole family and study some representative members.

The *dundubhi* which is equated with today's *nagara* is in every likelihood the most ancient of conical drums and finds mention in the *rgveda,* in the *Vajasaneya* and other *samhitas,* in certain *upanishads* and *brahmanas,* all belonging to what is generally known as the *vedic* period. The drum seems to have been popular and venerated as well, as would have been gathered from earlier references to it in this study. The *dundubhi* is also prominent as a martial instrument in the two epics and almost all subsequent literature. The present versions of the *dundubhi* are the *dhumsa,* the *nissan,* the *nagara* and so on, all met with in non-classical music. The tribal *dhumsa* of the Santals is a huge instrument made of thin metal sheets with a narrow bottom and a very wide mouth. Yet, in spite of its weight and size, it is hung from the shoulders and the drummer dances about beating it loudly with a pair of sticks. The *nissan* which is as old as the *Ramayana* is found in Gujarat and Rajasthan, though in very different forms. References to the *nissan* occur also in medieval Hindi poetry and in a musical work written in the thirteenth century. It was then a big metal bowl of either bronze, copper or iron, covered with buffalo hide and beaten with sticks. Right from the earliest references it has always been considered a martial drum, the vestiges of this function are seen in the Orissa *nissan* of the present day. The bowl drum in this region, played during the *dalkhai* dance, has a pair of antler horns tied to it; the dancers suspend from their necks the *nissans* and, while keeping the rhythm of the dance, conduct a mock battle thrusting horn against horn. The *dundubhi* is kept also in temples, to be beaten during worship or to announce prayers. The *nagara* is a very familiar drum throughout north India and it is quite possible that its name is imported from West Asia. Usually there are two conical bowl drums struck with sticks, the pair being known as *nagara* or *naqara.* The smaller of the two is higher in pitch and is the *madi* or female; the larger with a deeper tone is called the *nar* or the male. While the *naqara* or *nagara* is used in folk dramas, marriage and religious processions, the traditional place where it is found is the *naubatkhana.* This, as an institution, does not exist any more, and has gone with the disappearance of the princely states. The *naubat khana* or *naqara khana* was an apartment especially set apart in the tower of a castle, the gateway of the palace or even near the battle field and housed a number of instruments which were sounded to announce various royal activities and pleasures. The best known of such ensembles was that of Emperor Akbar and Abul Fazl gives a graphic account of it: "of musical instruments used in the *Naqarkhana,* I may mention, 1. the *Kuwarga,* commonly called the *damama;* there are eighteen pairs of them more or less; and they give a deep sound. 2. The *naqara,* twenty pairs, more or less. 3. The *duhul,* of which four are used. 4. the *Karna* is made of gold, silver, brass, and other metals, and they never blow fewer than four. 5. The *surna* of the Persian and Indian kinds; they blow nine together. 6. The *nafir,* of the Persian, European, and Indian kinds; they blow some of each kind. 7. The *sing* is of brass and made in the form of cow's horn; they blow two together. 8. The *sanj* or cymbal, of which three pairs are used.

"Formerly the band played four *gharis* before the commencement of the night, and likewise four *gharis* before daybreak; now they play first at midnight, when the sun commences his ascent, and the second time at dawn. One *ghari* before sunrise, the musicians commence to blow the *surna,* and wake up those that are asleep; and one *ghari* after sunrise, they play a short prelude, then they beat the *kuwarga* a little, whereupon they blow the *karna,* the *nafir,* and the other instruments, without, however, making use of the *naqara;* after a little pause the *surnas* are blown again, the time of the music being indicated by the *nafirs.* One hour later the *naqaras* commence, when all musicians raise the auspicious strain". The *Ain-i-Akbari* then goes on to describe in detail seven kinds of music on different kinds of instruments. (The *damama* or *kuwarga,* the *duhul* and the *naqara* were drums, the *karna* and *sing* were trumpets, the *surna* and *nafir* were oboes and the *sanj*—compare *jhanj*—was cymbal). **(18)**

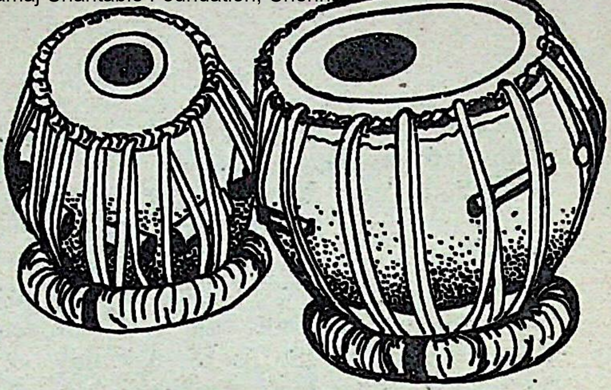
Smaller types of bowls are also very ubiquitous throughout the country. The names and regional types are too many for a detailed description. Some that need notice, however, are the *sambal* of Maharashtra, the *tasha* so common everywhere in north India in accompaniment with the *shehnai,* the *tase* of Karnataka and the *tamukku* of Tamil Nadu.

The *tabla* has perhaps created the greatest controversy, equalled only by the *sitar,* about its historicity and migration. The discussions become more confounded because of attempts at always equating its name and its history with the instrument and its antecedents. Take the present case of the *tabla.* The *tabla* is a Persian word and is a general one that includes all kinds of drums. But is the instrument Persian? Is it not possible that these aliens who came to India long ago gave this name to some indigenous drums which they found here? This is very much analogous to the *naqara* which has its Indian counterparts in the *dundubhi,* the *nissan* and other such bowl drums. There are many clues to show that the origins of the *tabla* are Indian. We have already seen that conical drums are very old in our country; and as early as the third century of the Christian era there is sculptural evidence, showing a lady with a small *tamukku* like conical drum in her lap and striking it with her hands. Having the drum in the lap for playing is characteristic with the *dagga*, one of the 'twins' of the *tabla* pair; so is playing with the hands. Again, multiple layers of membranes is common to many Indian *avanaddha vadya* and are found in the *tabla*. Moreover, loading the skin surface with some kind of a mixture is also typical of this country (and Burma); the use of two or more drums at the same time is also an age old practice with us. All these strongly point to the Indian parentage of the *tabla*. What might have happened is that local drums could well have received Persian names and evolved along new lines after the post-medieval period. It is a surprising fact that neither *Ain-i-Akbari* nor the near contemporary work, *Sangeeta Parijata*, give any reference to the instrument, though there is a possible reference to this word in Assamese literature of about the fourteenth century.

The *tabla* as we now find it, is a two piece drum, often collectively known as the '*tabla*'. Of the two, one is the *tabla* proper and the other is the *dagga* (*duggi* or *bayan*). The *tabla* is invariably made of wood and is a vessel broader at the bottom and narrower at the top. The face is made very much like that of the *pakhavaj*. There is a middle membrane almost as wide as the mouth and this is held by an annular ring of leather about two centimeters in width, pasted to it all round. This ring of leather known in Hindi as the *chanti* or the *kinara*, is stitched firmly to a leather braid, the *gajra*. This unit of central leather, the *chanti* and the *gajra*, together often called the *pudi*, is tightened onto the open mouth of the body by means of leather braces passing through the *gajra* and a leather ring at the bottom. Small cylinders of wood are inserted between the leather thongs and the body, for purposes of rough tuning. Finer adjustments are made by striking the *gajra* up for lowering the pitch and down for increasing it. The *tabla*, like the *pakhavaj*, has *syahi* loaded centrally. The *dagga* is just the opposite in shape: unlike its companion, it is narrow at the bottom and wide at the top a miniature *nagara*. The *pudi* is made and fixed like in the *tabla*, except that the *syahi* is not in the centre but is placed to one side. Also, the bowl is of metal, though formerly it used to be of wood or clay. There are no tuning blocks as in the other piece; as a matter of fact the *dagga* cannot be tuned accurately, whereas very accurate pitch adjustments are possible with the *tabla*. Both the drums are played with the hands but with a difference. The right drum (*tabla*) is struck with the ends and middle phalanges of the fingers as well as with the flat palm; for the left hand drum (*bayan*), on the other hand, the balls of the fingers, the flat palm and the base of the palm come into play. These strokes, which all have definite names, are combined or emphasized in a variety of ways, giving rise to a number of styles such as the Delhi *gharana*, the Ajrada *gharana*, the Faruqqabad *gharana*, the Lucknow-Varanasi *gharana* and so on. (19)

8. Tribal *nagara*

9. *Tabla* and *dagga*



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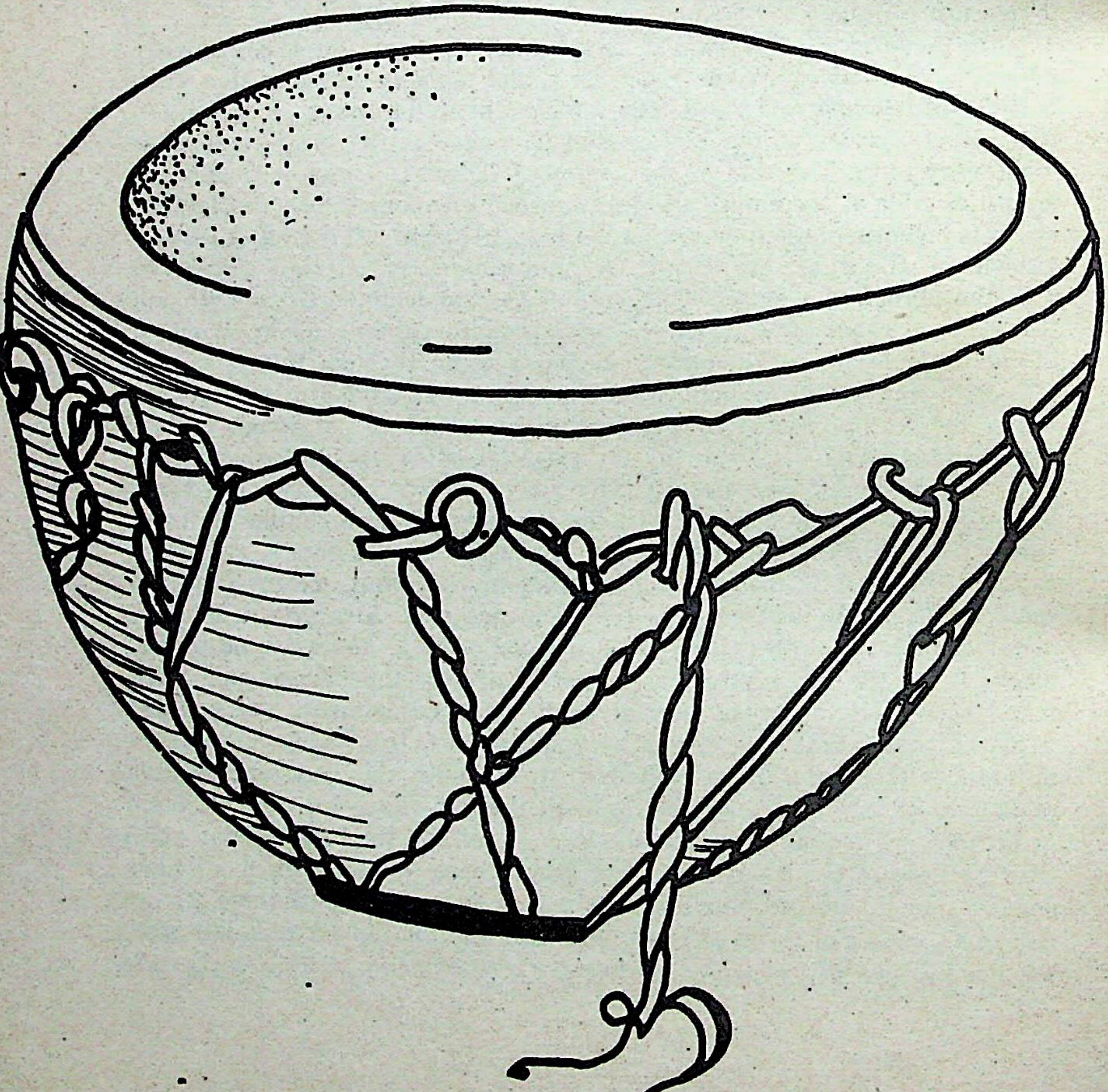

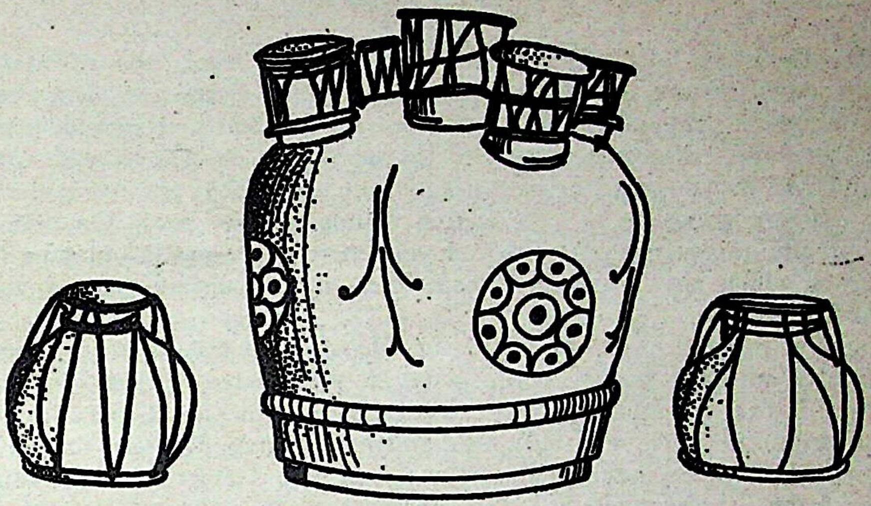

20. *Panchamukha vadya* with the *kudamuzha*

There were drums which had more than two faces though they are seldom, if at all, seen now. In ancient musicological literature one often comes across the term *tripushkara* which is interpreted in different ways. One meaning could be that it referred to the three major *avanaddha vadya*: the *mridanga*, the *panava* and the *dardura*. Another opinion is that the three positions of the *mridanga*— *oordhvaka* (the vertical), *ankya* (held in the lap) and the *alingya* (the 'embraced')—were included in the *tripushkara* which must have meant playing together three drums, one in each of these positions. Some scholars are of the opinion that they were three drums, one in each of these positions, while others are of the opinion that drums with three faces were called *tripushkara*. A *mridanga* with three heads has been noticed in the sculptures of Hampi, in Karnataka, the capital of the Vijayanagara Empire. It may be remembered that we drew attention to three pots tied together and played, as shown in a temple relief panel in Karnataka. The Dilvara temple in Rajasthan, belonging to the eleventh century, has a relief showing a musician playing a four headed drum. The *panchamukha vadya*, seen in some southern temple sculptures, is played today in a few places during worship. It is a large vessel—either of copper or brass—and has to be mounted on a small wooden cart for transportation within the temple precincts. On the top of the vessel there are five tubular projections which are the drum heads and each is covered with the skin of a milch cow. In actual performances, two small pot drums also of metal, the *kudamuzha*, are placed by the side of the *panchmukha vadya* so that there are in all seven faces; it is claimed that these are tuned to the seven tone ancient scale, technically known as the *shadja grama*. The five faces are named after those of Lord Siva: the central one is *Isana*, the northern is ***Vamadeva***, eastern is *Tatpurusa*, the southern is *Aghora* and the western is *Sadyojata*. The directions of the compass are indicated from the position of the player: where he stands is the north and moving towards his left hand will be the east, the south and the west in that order.

Before going on to the friction drums, a few words may be said about the importance of the drumhead construction and the playing techniques which have ensconced India in an almost unique position in the world of music.

The parchment in the *daff*, the *khanjari* or the *nagra* is attached directly onto the frame or the body; in some cases, at best, the membrane is first stretched across a circular hoop which is then mounted on the drum body. These simple mechanisms obtain in Western drums also. Further, all these have plain hides. These two factors—direct fixing to the frame or the body and the plainness of the surface—detract from the instruments good musical and tonal values; such drum faces are said to be 'noisy', bereft of agreeable sound qualities, due to a lack of uniform tension. This defect is got over by numerous contrivances in the more advanced membranophones like the *pakhavaj*, the *mridanga* and the *tabla*.

The first step is to stretch the skin uniformly. It would have been noticed that the central membrane in these drums is held by one or two layers of rings (*chanti*); it is this *chanti* and not the middle skin that is stitched to the *gajra* or the pinnal. Even this is very carefully and thoughtfully done: for the *chanti* is attached to the *gajra* not haphazardly, but at very close and regular intervals through small holes in the *chanti*. All these methods pull the hides very evenly round the entire circumference; besides, the *chanti* prevents the central leather layer from coming into contact with the frame or the body of the drum, thus preventing its wear and tear.

The next step is to load the membrane. As was mentioned earlier, this is done by sticking a temporary paste of dough or a permanent mixture (the *syahi*, *karanai* or *soru*). It has been shown by scientific experiments, the first of which were conducted by C. V. Raman a few decades ago, that such a process eliminates much of the noise quality and also brings about the production of regularly related tones (harmonics) from the skin. This method of loading is an age old practice in our country. Bharata (200 B.C.—200 A.D.) calls it the *vilepana* or *rohana* and describes the material to be used thus: "Now listen about the characteristics of the earth (suitable for this purpose). The earth which contains no gravel, sand, grass and husks of grains, and which does not stick and nor which is white, alkaline, pungent, yellow, black, sour or bitter, is suitable for plastering. . . . The blackish earth from a river bank, which is fine after squeezing out the water should be used . . . When the earth which spreads very much, is white or black or heavy or unstable or is full of husks, and blackish earth not producing desirable notes is all that is available, then one should use wheat flour or barley flour for this purpose. Sometimes a mixture of wheat flour and barley flour is used. One defect in this is that it produces monotonous tones" ... "But one should not apply to *mridangas* a *rohana* consisting of sesamum paste mixed with cow's ghee and oil". While on the left face of the *mridangam* and the *pakhavaj* (in rare cases, the *dagga* also) dough is used even now other mixtures have been invented and we now have highly efficient combinations of ingredients for the black *soru* (or *karanai)* and the *syahi* of the drum heads. By the early middle ages, rice flour, wood ash and jaggery (molasses) came to be employed in the plasters; and by about the seventeenth century iron filings also find a place. Now a days, the general composition of the black mixture is glue, iron or manganese powder, charcoal powder and wheat or rice flour. The method of putting on the *syahi* is also a very well tested one and has to be punctiliously followed. First a layer of the paste is spread on the bare hide, to the required area. While still wet it is polished smooth with a heavy stone. Before this layer dries up another, of a slightly smaller circumference, is put on, again polishing it with the stone. Layer after layer is thus affixed, each successive one of less diameter than the previous one; the number of layers is determined by the size of the drum head and the pitch to which it is to be adjusted.

While mentioning the *gharanas* of the *pakhavaj* and the *tabla,* a reference was made to various strokes on the drums. This again is a notable and characteristic element of Indian drumming. Every stroke has been well defined in terms of the point of striking, the position of the fingers and the palms and so on. This is often the case even in tribal music, for example the Santals who call the stroke patterns *rad.* In classical music texts the name for these is *patakshara* or merely *pata* or *akshara.* In current practice the drum alphabets for the *pakhavaj* are known as the *thapi,* for the *tabla* the *bole* and for the *mridangam* the *sollu.* There are many kinds of rhythmic arrangements of the *patas* and these are called the *paran, qaida,* the *rela* and so on in Hindustani music and the *solkattu* in Karnatak music. The memorizing of the *patas* for any pattern enables the drummer not only to elicit them on the instrument but keeps him on the right time track. The Hindustani system has also a way of defining a *tala* or the rhythmic cycle by *boles* or *thapis,* and this basic definition is the *theka* by which the *tala* can be identified.

There are not many friction drums in India. One of them, played by the worshippers of Mariyamma in south India, is the *burburi* which is a cylindrical two faced instrument. While the right hand beats the rhythm with a straight stick, the left hand rubs the membrane on the other side with curved twig. The same method is adapted in the *urumi,* an hourglass drum found in Tamil Nadu.

V

Wind Instruments

HOW was the first wind instrument thought of? Which were the early types and where in the world have they been found? Where and when in India did the first *sushira vadya* come into existence? Unfortunately, none of these questions is easy to answer, if any answers could be found at all. Whereas drums of clay, remains of stringed instruments and prehistoric clappers and such material give clues to the origins of their class of instruments, aerophones are not so prolific in relation to social functions for us to derive theories regarding their sources.

One very popular belief is that the creation of the first *sushira vadya* might have been suggested to man by the wind whistling through holes in bamboos in the glades. This, while a common occurrence in the woods, does not relate to any human activity as was seen in the case of solid instruments, drums and, as we shall discuss later, stringed instruments. So, some other plausible area should be sought; and a few suggestions are beng made here. The first and most natural is the simple common act of whistling which is very primitive; further, it is one indulged in by children and the aged, specially men. It is a *bodily* act that could have very easily suggested the making of wind instruments. The reader might have also noted in many rural areas people speaking with hollow and loosely closed fists in front of their mouths, as a mark of respect. An extension of this is the habit amongst some primitives, for instance in Brazil, to have "megaphones cut from a hollow branch or a large cone, into which the player spoke, sang or roared... he did not strive for a musical sound; on the contrary he wanted to distort his natural voice and to produce a harsh sound in order to frighten evil spirits". Another example is of a traveller in New Guinea who saw that the chieftain invariably held a conch shell before his mouth "so his voice had a very hollow sound." It is an every day sight in our rural and semi urban homes to see housewives blowing into the fire through a metal or wooden tube to make the fire burn better. And we have all played with bottles, blowing across their mouths. These—whistling, mouth megaphones, conch shells, domestic blow tubes—could well have given birth to early wind instruments. And once again we are led to the conclusion that nonmusical appliances are often the parents of musical instruments.

Had there been any wooden wind instruments during the early stages of human civilizations they might not have come to light in the excavations; for vegetable matter like bamboo or any other wood could not have withstood the decaying effects of wind and water. It is therefore not surprising that the prehistoric instruments found are whistles, bone trumpets and bone flutes. Paleolithic wind instruments of any consequence are bone flutes without finger holes. Later on we come across flutes with holes, as well as conch shells; and much younger than these are the metallic aerophones, flutes of bamboo and so on. As for instruments like the oboe, the *shehnai* and the *nagasvaram*, they must have been very very recent indeed. In our country, the Indus civilization's excavations have thrown up only clay whistles shaped like birds and hence sometimes known as bird whistles; wind instruments made of bone are found even today in the Himalayan regions. The flute, according to a distinguished scholar, was the invention of the Savara people living in the hill forests of Andhra and Orissa. There is an interesting tale from New Guinea about how the first flute came into being. "One day a man went to the bush with his wife to gather fruit. The man climbed up a high tree and threw the fruit down, and the woman put them into her net. Suddenly a big piece of fruit fell onto a dry bamboo tree and cracked it open with a sharp sound. The frightened woman ran away, for she did not know what had made the noise. Out of the slit bamboo appeared a cassowary (the Melanesian counterpart of the phoenix, symbol of rebirth) making a buzzing sound. The man at once built a fence round the bird, ran into the village and told his friends what had happened. They began to cut pieces of bamboo and tried to draw a sound from them and finally discovered that blowing across a stalk they could make a sound similar to that of the cassowary. This was the first flute."

Like the drums, wind instruments—particularly trumpets and flutes—have strong socio-religious associations and functions. Both these instruments have very strong phallic significances in primitive as well as later 'civilized' societies. In some aboriginal human clans if a woman saw a trumpet she was killed, because it was a 'male'. As a matter of fact, some ethnologists are of the opinion that it is this masculinity which makes the trumpet an inciter in war. The flute also has similar masculine symbolism. In New Guinea, for instance, some flutes of nearly six meters length have a special function in certain sexual rites. The *filili* or *fifli*, a thin flute made of bamboo a meter long, is one of the important instruments of the Lhota Nagas of Assam and Mills gives a short account of its role in courtship; "This instrument is a favourite one with the young bucks, who lie on their backs in the 'moorung' (bachelor dormitory) and tootle the names of their lady-lovers in simple tunes. In every village a particular combination of notes represents the name of each fair one, and strange enough though it may seem, no one listening ever seems to have any doubt as to what lady's fame is being celebrated". Hutton has observed among the Sema Nagas of the eastern hills certain taboos in the use of the flute which they call the *fululu*. "The use of the flute is forbidden to women, for fear, it is said, that they might by skilful playing seduce the young men and become depraved.....even males may not play the *fululu* between the sowing and reaping of paddy... for fear of causing wind to damage crops". The phallic associations of *fululu*, woman and sowing are only too clear to need any further elaboration. Note also that the pastoral flute's call of Krishna is addressed to *gopis*. The *gopis* of Brindavan feel jealous of the flute and say, "We wonder what holy and sacred deeds has this flute done that it drinks the nectar of His lips which we deserve and leaves the remnants for us. And like the elders being happy at the union of their daughters in marriage, rivers and bamboo trees shed tears of happiness". But this music has also become a symbol of the divine call to human souls. The erotic has thus been transformed into the esoteric, with the metamorphosis of woman's relation to man into the Radha-Krishna love of which all our *bhaktas* have sung. We must also not forget that the flute has gone much beyond the erotic significance. The mind of man has to be emptied and made hollow like the instrument so that He can play His tune on it and His breath may flow in it. Finally, it is an authenticated fact that in certain para-mental conditions the sound of the flute, the *naqara*, the thunder and the bell are heard.

Wind instruments may be classed under two groups. In the first no mechanical reeds are used. This category comprises bugles, trumpets, horns, different types of flutes, all of which can be further classified. The second family has one or two mechanical reeds fitted to a tube. Such aerophones are further separated into a number of types such as the single beating reed, the double beating reed and the free reed. In all the instrumental species listed so far it was the wind column in the tube that really determined the pitch and quality of the sound; the lips and the reeds acted merely as valves controlling the flow of air. But in the harmonium on the other hand, the air flow only excites the reed and the sound we hear is of the metal tongues inside the instrument and not that of the vibrating air. It is for this reason it is even questionable whether instruments of this class can be called wind instruments at all.

Following the trend of the arguments in the previous chapters, it is but proper that we turn to naturally available tubes as the primitive *sushira vadya*. The materials that suggest themselves to us are animal horns, dried bones, conches, bamboo and hollow shoots of trees. We shall see how each of these has been put to use as a wind instrument.

Animal horn is one of the earliest trumpets we know of, as horns of oxen and buffaloes as instruments are commonly met with from very ancient times. Sumerian civilization had the *si-im; si* meant a horn and *im* was 'wind'. These ancient horns were in their first stages probably of oxen and later of metal. Old Jewish texts mention the use of a goat or ram horn. It was made by steaming the horn till it became soft when the inner marrow was removed and the horn bent. Here also one finds ritualistic relations for "the *shofar* (blown in the temple) at the New Year was (made from the horn) of the wild goat, straight, with its mouthpiece overlaid with gold... (The *shofars*) on the days of fasting were ram's horns, rounded with the mouthpieces overlaid with silver".

Thus it is immediately evident that the introduction of a mouthpiece is an ancient practice. In very simple and primitive trumpets air is blown straight into the tube without the intervention of such a contrivance. But the fixing of a mouthpiece, which is a small flat disc at the blowing end with a hole in it, facilitates the resting, pressing and controlling the pressure of the lips when blowing. Horns and conches may be played from one end, therefore they are called end blown trumpets; sometimes air is blown from a hole in the side at the narrow tip, when they are known as side blown trumpets, in which case no mouthpiece is necessary. In all trumpets, horns and conches, the moving lips of the player act as valves regulating the air as it enters the tube. The limitations of this process being what they are, this class of instruments has never been of any use in delicate music and they have always been outdoor instruments.

In our country, horns are ancient but can still be found now in tribal and folk music. The word used is *shringa* or its modifications in Indo-Aryan languages and *kombu* or its variants in the Dravidian; both mean horn. Obviously animal horn was the progenitor of all later 'horns', because these original words are used to denote all metal horns also whatever be their shapes or sizes. Tribal life employs the *srnga* abundantly, for instance the Bhils who call it the *singe*; *kohuk* is a horn of the Marias of Madhya Pradesh. In the tribal areas of the north-east, Angami and Lhota Nagas blow the buffalo horn which the former call *reli-ki*, that

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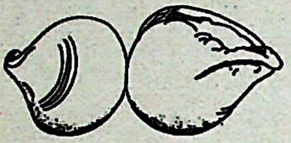
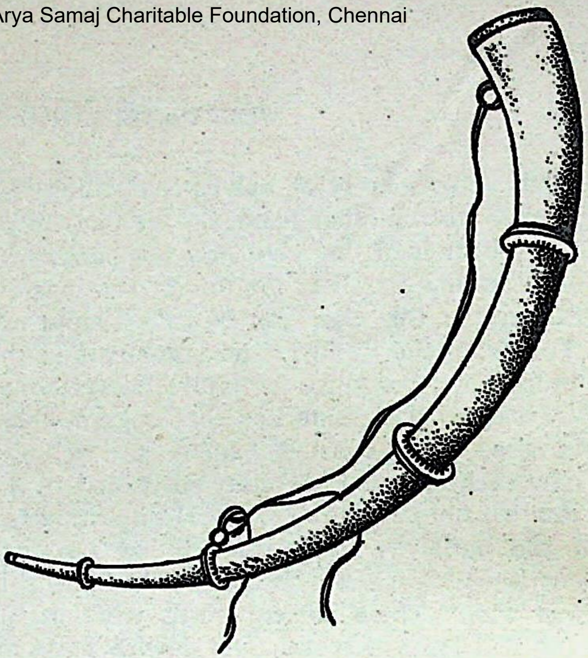
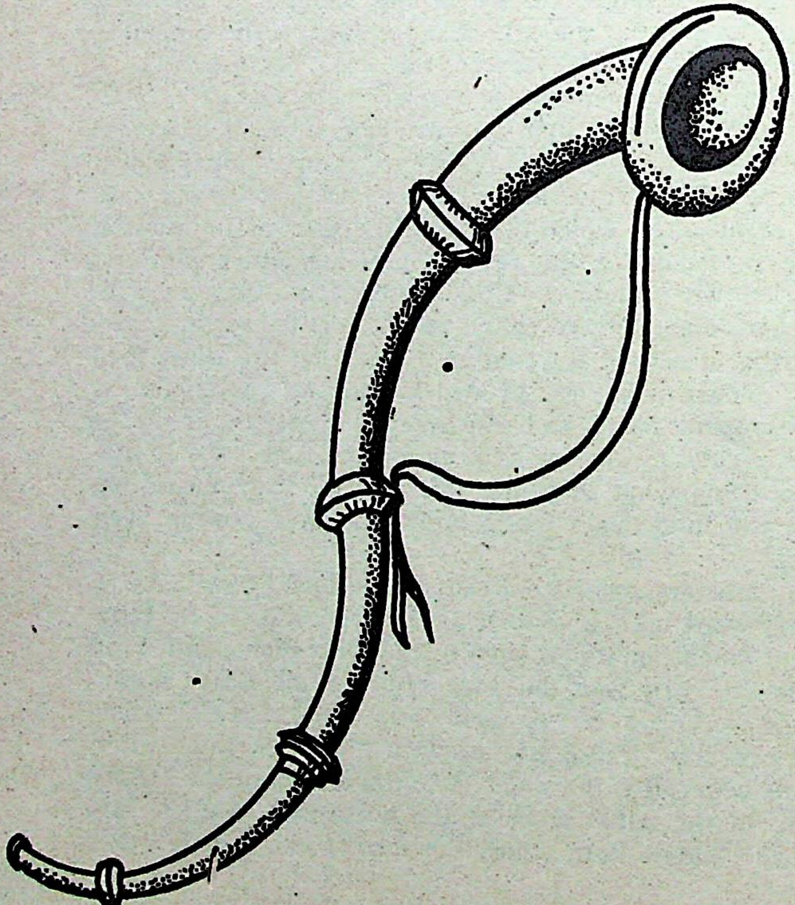


21. *Kali Kommu*
22. *Narsingha* or *ransingha*
23. *Sankh*





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is about half a meter long and has a small bamboo tube attached at the blowing end to serve as a mouthpiece. The Santals have the *sakna* which again is buffalo horn. Horns of this animal and of the deer are used in some parts of Uttar Pradesh; the former is called the *visan* and the latter the *singi*. The deer horn trumpet has a special association with Siva who, it may be noted, has the deer in one of his hands.

While all the horns enumerated so far are blown from the tip—that is, they are end blown—the *singha* of the Santals of Orissa is a side blown instrument. There is a small orifice near the narrow end of the horn and the player presses his lips on this to play it.

Folk literature naturally has many occasions to refer to this kind of a trumpet, particularly in ballads extolling the valours of heroes. There is a Telugu folk story, *Katamaraju katha*, which has an episode of Nallasiddhi going to battle. The march is described thus in the ballad: "Soldiers blew the *naferi* endlessly, the *booraga* (trumpet) and *kommu* (horn) were sounded as the earth resounded to the valiant march". As was pointed out earlier, the words *singa* and *kombu* are now applied to a variety of metal horns also and this very fact makes literary references ambiguous; one is therefore not certain whether a particular reference is to the natural horn or to a man made instrument. Textual sources are hence not always reliable. On the Sanskritic and related side many evidences are available. *Jatakas* use the word *turiya* which meant perhaps a trumpet, but was also a general collective noun for instruments; the term *sing* however finds currency from the *Milinda prasna*, an ancient Buddhist scriptural text in Pali. *Mahabharata* has the *govishanika* which was quite probably a cow's horn. Krishna is even called *srnga priya* in the *Bhagavata* and there is an incident where He wakes up his cowherd friend to the sound of the *srnga*. Music texts, of course, include the *srnga* as one of the *sushira vadyas* as can be seen from the *Sangeeta makaranda* onwards.

The *kombu* as one meets it now in south India is a C-shaped trumpet made of brass or copper and is usually constructed of three pieces with the blowing end having a mouthpiece and the outer piece speading out into a circular shaped flare. The *kombu* is played at weddings and religious processions, as well as in front of the bier; it is one of the *pancha vadya* ensemble. Often the smaller sized *kombu* is differentiated as the *timiri kombu* and the larger one as the *bari kombu*. (21)

There is yet another *kombu* which is S-shaped and much larger in size than the one described. This instrument is known by various names: *turi* in Uttar Pradesh, *bankya* and *bargu* in Rajasthan, *banke* in Karnataka, *ransingha* in Madhya Pradesh and *narsingha* in Himachal Pradesh. A further variation of this is the *nagphani* of Gujarat. As the name signifies the instrument is in the shape of a serpent *(nag)* and the flare is the face as also the hood *(phani)*, with an open mouth including the split tongue. (22).

The earliest straight trumpet was, in all likelihood, made of bone. This does not seem to occur in India except in the Himalayan regions, specially connected with Buddhist *tantra*. The bone trumpet there is called the *khang ling* and is made out of a femur. The thigh bone of a woman seems to be preferred and the most valued one is the left bone of a sixteen year old Brahmin girl. Apart from human femur the thigh bone of a tiger is also used and is known as the *stag ling*. If of human beings, it should be of a person of a very high class or a very low class who had died in an accident or of an infectious disease, or one who had been murdered. This *ling* is played in various rituals and ritualistic dances to propitiate angry gods; it is also employed by the weather-maker to "scare away all demons who try to prevent a rainfall." Tibet has also brass replicas of such *khang lings*, beautifully decorated with the 'dragon' motif.

Straight trumpets are indeed very old in human civilizations and are found even among tribal people and societies isolated to some degree from larger human movements. They have been found in neolithic excavations outside India and in prehistoric cave painting in our country. Sumerian and Babylonian cultures had them; indeed, it is significant that the latter's *qarna*, the early Egyptian *qarnu* are similar, at least linguistically, to the *karna* which is a straight trumpet in northern India. As was pointed out earlier, the ancient literatures of our land often give *turahi* and *turya* which could have been tubular instruments we are describing. Besides *turahi* other words employed to mean various kinds of straight trumpets are *tutari* and *bhongal* in Marathi, *tuttoori* in Kannada, *kahal* in Oriya, *karna* and its variants in many districts of the Gangetic valley and nearby areas, *bhenr* of the Oraons, the *bhenr* of Uttar Pradesh and so on.

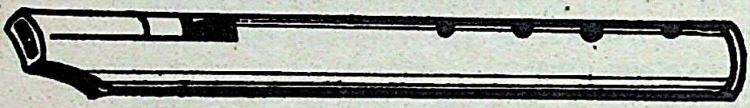
Kahala was and is an important trumpet known to us for some centuries and heard now everywhere, though the name is more popular in Orissa and Karnataka. It was made of gold, silver and copper of about half a meter in length. Today, naturally, a golden *kahala* is unthinkable, unless it is a curio kept in a temple or the old princely paraphernalia. Sometimes one does come across a silver *kahala* or *karna* amongst the processional accessories of deities. The common villager therefore uses a copper or brass *kahala*.

One interesting example is the *thunchen* of the northern hills of Laddakh, Tibet and Bhutan. This, as with all instruments here, is ceremonial and is played in ritual dances and music. It is a huge trumpet nearly three meters in length, made of copper and decorated with silver. A pair of them is employed and the trumpeteers, known as *thunchen pa*, announce the commencement of ceremonies from the *gamba* or the temple, as also accompany the dances. The length and weight of *thunchen* make it extremely unwieldy; so the flared end is rested on the ground or a special stand and the player stands or sits while blowing into the tube; or else the instrument is carried on the shoulders of an assisting monk.

Tiruchinnam is a particular type of straight trumpet found in the peninsular areas. Usually a pair of these slender and long instruments are blown together and it was a practice till a few decades ago for one musician to blow into both of them simultaneously. This seems to have been the case in Nepal as well and there is even a relief in Chandi Jawri in Indonesia, dated 1300 A.D., showing such a double trumpet.

The shell trumpet is also an extremely primitive, signalling and musical tool found in almost the entire world and in the most ancient civilizations like those of Assyria, Mexico, Peru, China and India. With us, the *sankh* or conch shell as a musical instrument is known in the entire subcontinent, from Kanyakumari to the Himalayas and from Gujarat to Meghalaya. While it is not of any consequence as a sophisticated *sushira vadya,* it was used in war as a heraldic instrument and now-a-days in *puja,* folk music and dance. It always was a member of the *pancha mahasabha* and now has a prominent place in the *pancha vadya.* Historically the oldest evidence is from the Harappan civilizations, though one cannot be sure whether the conch found in the remains was a musical instrument at all. *Vedic* references to the *bakura* which was a conch is another pointer to the antiquity of the shell trumpet. *Sootra* literature also has the *gomukha* which might have been either a conch or some other form of bugle. Considering the fact that the *sankh* was pre-eminently suitable for outdoor purposes, it is no wonder that the epics and later literature which deal with the lives and struggles of royal dynasties contain profuse references to it. When wars were declared or their victories were announced and when happy occasions were celebrated, the conch was sounded as it was considered an auspicious instrument. For instance when Bharata goes to Nandigrama to meet Lord Rama, the *sankh* and the *dundubhi* accompanied the singers. *Srimad Bhagavata Mahapuranam* describes beautifully the arrival of Sri Krishna to Dvaraka thus. "Having come to the greenland of Dvaraka, He blew on His conch to appraise the people there of His arrival. As He held the white *sankh* in His rosy hands against His coral lips, it shone like a white swan amidst pink lotuses". The simplest way of converting a natural shell into a trumpet is to cut off of the closed end thus creating an access into the spiral chamber within; sometimes a hole is bored at the side near the closed tip. In both cases the player blows directly into the conch. However, mouthpieces are often attached and these may be small brass discs or tubes of varying lengths. In the example already cited of the Bharhut monkeys there is a long tube fixed to the *sankh* which almost forms and looks like the flare of a trumpet. (23)

The incident narrated earlier of the New Guinea couple who invented



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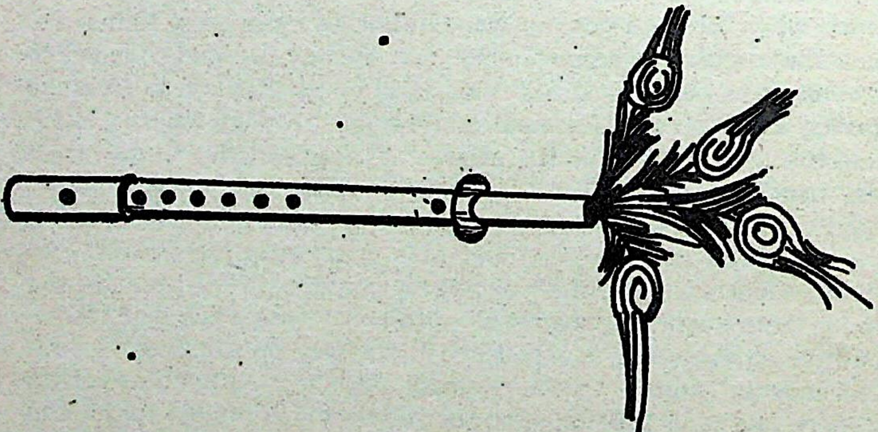
24. *Bansri*: beak flute
25. *Tirayu*: a tribal flute



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the "first" flute is familiar to every boy who plays with a bottle, blowing across its mouth. Wind instruments using this principle are the endblown flutes of which there are a number of folk and tribal examples. One of them is the *fifli* of northeast India. It is a small bamboo length, of approximately fifteen centimeters, one end of which is open and the other end closed. The opening is placed on the lower lip, the flute being held down vertically, and air is blown across this opening. Obviously only very simple tunes can be played on the instrument. A little more complicated *fifli* which can produce melodies of larger range is constructed by binding a set of such tubes of reed or bamboo and of various lengths somewhat like a small raft. Since the lengths of the tubes are dissimilar each produces a different pitch—the shorter ones sounding shriller tones. This *fifli* found in our country is the panpipe of Europe. The more common type of endblown flute heard in the plains is exemplified by the *narh* of Rajasthan. This is a long bamboo instrument and is played almost like the *fifli*. However, the tube bears usually four holes which are manipulated to give simple melodies.

There is another class of flutes which are blown into from one end but in an entirely different manner. The blowing end is not plain as in the above cases but is pressed into a narrow opening which is technically known as the beak; hence flutes with pressed ends are called beak flutes. Further, just near the beak along the tube there is another hole, the fipple hole. When the musician sends a current of air into the flute through the beak, it strikes against an edge in the fipple thus producing sound. The player creates melodies by closing and opening the finger holes on the body of the instrument. This kind of flute, known as the *bansuri* in northern India, is very common specially as a pastoral instrument and is usually met with as a single flute. But in Punjab, Rajasthan, Maharashtra and some other areas there is another instrument, the *algoza*. This is, in fact, a pair of beak flutes played simultaneously. The two flutes are placed together inside the mouth and blown into at the same time. Both of them have, of course, orifices for playing tunes. But it is usual to use one of the instruments for the melody and the other to give the drone or base note. (24)

The horizontal flute is the best known and most popular throughout the country. It is also the only instrument of this class which has the honour of spanning tribal, folk and concert music, though the endblown ones and the beak flutes have so far not been accepted into the fold of the classical family. The reason seems to be the versatility of the cross flute. Indian music at its refined excellence is rich in fine pitch differences and ornamentations: the former are the *srutis* and the latter the *gamakas*. Now these are best obtained by the complicated fingering techniques, adjustments of the pressure of blowing and slight changes in the angles of the flute on the lip. All such manipulations are possible only with the horizontal flute; the *narh*, the *fifli* and the *algoza* can hardly lend themselves to such a finesse of handling. The flute now being described, the horizontal or cross flute, is closed at one end and open at the other. A few centimeters from the blocked end there is a hole known as the embouchure or blow hole into which the flutist blows. Along the body of the instrument there are a number of apertures which are worked by fingers for playing a tune. One important fact to be kept in mind is that flutes in our country do not have any mechanical valves or keys to operate on the holes, for the use of such aids hinders the production of the tonal niceties of *raga* music and hence have been avoided by our instrumentalists. Also our artists and audiences still prefer the bamboo flute, because of its mellow quality, to metallic tubes. The length of the *venu* varies and depends upon the context: the shorter ones are employed for faster music and higher pitch, whereas the longer flutes are meant for slower music and lower pitch. The word *venu* was advisedly used here to show how this and many other instruments get their names. In this case, it means just bamboo and the connection between the flute and the word is patent. A similar etymology exists with *vamsi*, *bansi* and *bansuri* which are all derivable from *vaṁsa*, that is, bamboo; the name persists even when the flute is made of metal, as with the *śrnga*. In the Dravidian tongues the name most often is based on the root word *kolal* which means a tube: *kuzhal* (Tamil), *pillan-kuzhal* (Tamil), *kolavi* (Kannada), *pillanagrovi* (Telugu) and so on. However, *venu* seems to be the most ancient term as it occurs in many *vedic* texts which also have the *toonava* and the *nadi*; these two were also flutes probably of marsh reed. Ancient sculptures and murals, as can be expected, abound with illustrations of this instrument. (25)

The flutes and trumpets described thus far had no mechanical parts, either to produce the sound or to control its pitch. In the trumpets, horns and conches the lips acted as flue controls and in the flutes the edge of the blow hole or the fipple discharged such a function. We will now turn to wind instruments that do use mechanical vibrators in some capacity or the other.

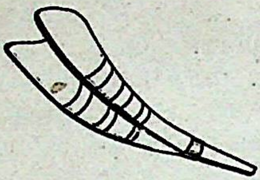
These vibrators that are fixed to a tube or an air reservoir are known as reeds; evidently they were once made of real reeds. With us they are called *patti* (in Hindi), *seevali* (in Tamil) and *aku* (in Telugu) all of which go to show their origin: from leaves and marsh reeds. However, as we will have occasion to see, reeds may be integral parts of a bamboo tube or a cane tube and in many modern instruments may be of metal. The apellation, nontheless, continues.

Reeds are of two broad categories: the beating ones and the free. The first type consists of a small vibrator which closes an aperture and hence beats against the edges of a hole; or else it may be a pair of little pieces of reed with a gap between them to allow the flow of air.

but beat against each other while vibrating. Of the former kind are the reeds in the *pungi* and the clarionet; the latter are those found in the *nagasvaram*, the *shehnai* and other oboes. The free reeds are very much more scarce in India and can be seen in the harmonium and the rare instrument, *khung* or *rusem*, of the tribal areas of eastern India. The reed here moves inside a hole and does not touch the sides of the opening: hence the name. Further, there is one very essential difference between the beating and the free reeds. For example, in the *pungi* and the *nagasvaram* the reed (or the pair of reeds) *does not* produce the sound we hear as music; it acts only as a valve regulating the air current. Its sound and pitch depend entirely on the *tube* of the instrument, the length cf which is changed by manipulating the finger holes. On the other hand, in a harmonium *it is the reed* that produces the sound and the air is just instrumental in producing the vibrations; hence it is necessary to have one reed for one note.

The best known and most ubiquitous single beating reed is the *pungi* (or *been*) also known as the *mahudi* and *nagasvaram*, the snake charmer's pipe which has become a tourist attraction because to many a foreigner India is still a country infested with cobras! The instrument in its structure and mechanism is extremely simple. The upper part consists of a dried clabash into which the player blows, the air collecting in the chamber. This air under pressure is now released from the lower end of the gourd through two bamboo or marsh reed pipes or metal tubes. The upper portion (of each pipe), which is inserted into the calabash and hence cannot be seen from outside, has an opening on its side which is covered by a partially cut skin of the bamboo itself. This is the valve or single reed which, being larger than the aperture, beats against its edges and controls the air flow as it passes out of the gourd through the pipes which have holes for playing the melody; but only one of them is used for producing the tune, while the other provides the drone. While the snake charmer's music can be hypnotic, even intoxicating for human beings—it is doubtful if it has any effect on the reptile, because of the simple fact that it has no ears to hear with. (26).

A very near cousin of the *pungi* is the *tarpo*, also called the *ghonga*, the *khongada* or the *dobru*, depending on the size. The principle of construction is exactly the same as in *pungi*. In this also there is a single beating reed which acts as the valve; even the other parts are comparable in function. In place of the small bottle gourd in the *pungi* is the long gourd, called *doodiya bhopla* in Marathi. This has a hole at the side instead of one at the tips, and the opening is also fitted with a mouthpiece. The air blown through this is stored in the hollow of the dried pumpkin, it accumulates pressure and then flows out through two bamboo or reed pipes. These have vibrators as in the *pungi* which are invisible. They also have holes outside which are visible for playing the music. There is one



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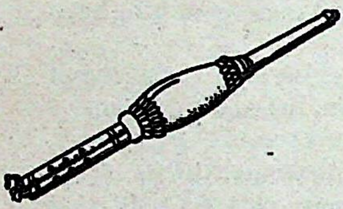
26. *Pungi* or *mahudi*
27. *Tarpo*
28. *Pepa*



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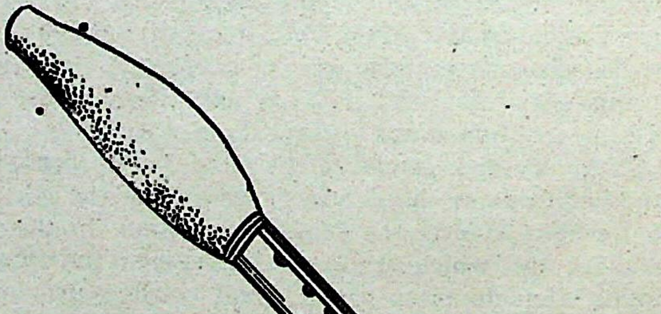

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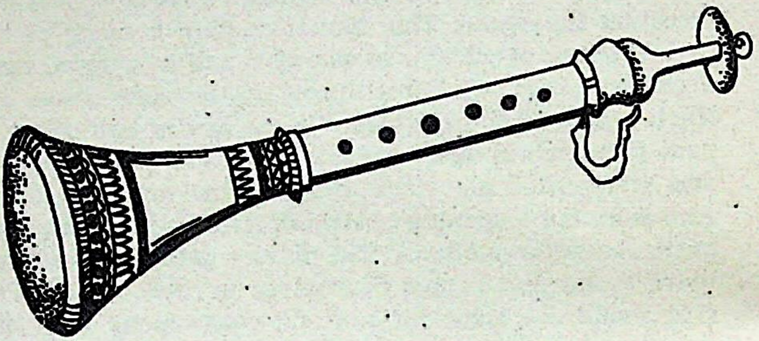
accessory not found in the *mahudi*: this is funnel for amplifying and directing the sound. This funnel or flare is made of the *tad* or palmyra leaves, strips of which are wound round in a spiral manner. The *tarpo* is a characteristic wind instrument of the rural areas of Gujarat and the Varli people of Maharashtra. "In the second half of the month of *Bhadrapada* (September) when rice is ready for reaping, the Varli villagers gather and night after night the music of the *tarpo* can be heard from afar. And from the beginning of *Ashvin* (October) the *tarpo* dance is performed every day after sundown. The players gather in the centre of a circle and twirl round and round themselves as they dance. People collect in a ring round the *tarpo* players and dance along with them. They turn as the players turn, never with their backs to the *tarpo* blowers. On special days the Varlis assemble at the temple of Goddess Mahalakshmi, when religious initiation is given and a large number of *tarpo* players gather occupying every bit of available space; competitions in virtuosity are held as a part of the festival." (27)

The *mashak* or *titti* is the bagpipe of India, though the native variety is now being replaced by imported instruments. Here again certain work relations are noteworthy. The air chamber in this instrument is not dried fruit but a full goat skin bag, legs and all. This pouch, also called the *mashak*, is put to at least two entirely unmusical uses. It is a water container not only for storing potable water but it is a common sight to see labourers carrying water in it and sprinkling it on masonry. The *mashak* when properly sealed and filled with air, becomes an efficient float with which to cross rivers. It is this same bag which is a part of the wind instrument; (incidentally *titti* in Telugu also means a bag). The leather reservoir in the instrument is connected to a short length of bamboo through which the *mashak* is filled by blowing into it. The other end has the two bamboo pipes each with a reed, and finger holes, inserted into the air container. The player first fills the *mashak* by puffing into it; the inflated goatskin is kept under the arm where small pressures can be applied to send out the air which, as it is expelled, makes the reeds vibrate.

There is one more single beating reed that needs our notice, even though it is not found in all parts of the country. This is the *pepa* of Assam played at the Bihu or spring dances. It consists of two bamboo pipes nearly twenty centimeters long, tied together with finger holes. One end has the reed which is either covered by a bamboo tube or is left bare. This end is put into the mouth and blown to produce the sound. The other end of each pipe bears a buffalo horn or a metal flare to serve as a megaphone. (28)

It is strange that though our country does have so many of the single reed instruments in some form or the other, we have not yet made a pipe which is concert-worthy. The significance of this will be realized when we remember that we import single reed instruments like the



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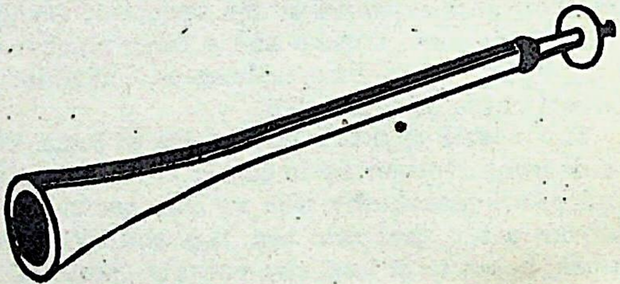

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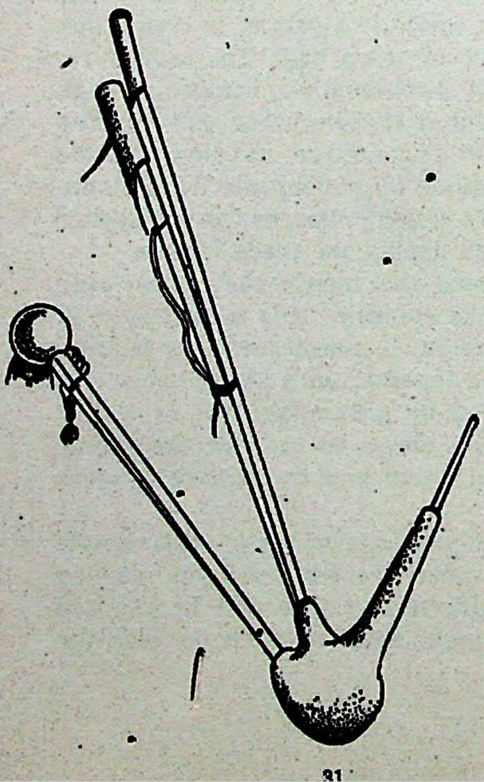

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29. Tribal *mohori*
30. Folk *shehnai*
31. *Khung* or *rusem*

clarionet, so unsuitable for our music, and yet have made the double reed pipes like the *shehnai* and *nagasvaram* which are so sophisticated that they are heard and appreciated on international concert platforms.

The two-reed instruments in the subcontinent have been problematic in many ways. The difficulty is principally in tracing their coming into India, if they migrated from outside at all. We have so many native oboes and so many local names for them that it is difficult to believe their 'foreign-ness'. On the other hand, the variety of forms and names not indigenous are equally numerous which points to non-Indian influences, if not a total influx. The typically local names are the *muvari*, the *mohori*, the *madhukari* which are all perhaps linguistically related to '*mori*' meaning a tube or drain; '*mukha veena*' very simply shows that it is a *veena* (instrument) played with the *mukha* (mouth). Another cluster of names includes *nagasvaram*, the *nagasar*, the *nayanam* and so on. These names mentioned so far are all typically Indian whereas the *shehnai*, the *sundri*, and the *naferi* which are names of double reed wind instruments in use in our country are from beyond the borders of the land. The first reference to *mavari* occurs about eleven centuries ago; references to *mukha veena* occur in the literatures of south India from the twelfth century onwards and *nagasvara* from at least the fourteenth. The *shehnai* finds a place in our literary works from the thirteenth century and is likely to be connected with the *zurna* of Central and West Asia. There are some names which have interesting sidelights on the transference of epithet: the *melam* and *olaga* are two such words. Both these have a lexical meaning of 'group', 'court', (particularly of overlords and kings). Since among the ensembles played here the *nagasvaram* is very important, the instrument itself is called the *melam* and *olaga* (in Tamil, Kannada and Telugu). The big *nagasvaram* is usually called the *bari nagasvaram* and is typical of the folk ensembles *nayyandi melam* of Tamil Nadu and the *karaga mela* of Karnataka, it is also the only oboe now in use in Karnatak classical music. All the instruments listed above have essentially the same construction. There are two reeds made of special type of leaves or marsh grass, winnow shaped and nearly a centimeter in length. The narrower ends of the reeds are together fitted into a small tube, technically known as the staple. This in its turn is inserted into the long wooden pipe of conical bore ending in a flare: Indian books describe this shape as that of the *datura* flower. It is this part of the instrument that has four to seven holes for playing and is responsible for the sound. While wooden oboes are the rule, silver and gold ones are also known and there are rare specimens of soapstone. Till very recently the *shehnais* and the *nagasvarams* were outdoor instruments played particularly on occasions considered auspicious and happy such as processions and weddings. Within the last few decades, however, they have been brought to the concert halls and the radio with phenomenal success. (29, 30)

Finally, it remains to study the free reed instruments and this leads us deviously to the harmonium. As mentioned earlier the reed here is a tongue fixed at one end vibrating within an aperture without touching the edges of the frame. The lamella is made to oscillate by blowing with the mouth or by working the bellows; the sound we hear is that of the reed, not the air.

In the eastern part of our country there is an instrument known as the *khung* or the *rusem*. From the outside it might even be mistaken to be structured on the principles of the *pungi;* but this is not so. Like in the snake charmer's pipe, there is a small gourd which serves as the container into which the player fills air through a small tube. But the resemblance to the *mahudi* ends here, for the parts which produce the sound are entirely different. The *khung* carries half a dozen 'sound tubes' inserted into the gourd and these are arranged in groups, three in each set. The end part of each pipe within the calabash has the free reed: a small oblong opening is cut out here, leaving a thin splice which vibrates in it. The tubes at their outer ends are capped with small fruit shells or bamboo cups to mute the sound. The mechanism of tone production is also out of the ordinary and is achieved in the following manner. Every one of the reed pipes has a small hole in its side. When a particular note is to be produced, the hole in the tube played is *closed*, not opened as in the conventional pipes, thus building up a pressure in that tube on blowing; this makes the reed vibrate. Since the apertures in all the *other pipes are kept open*, the *reeds in them do not function*. Simple but extremely sweet tunes are thus played. The fact that the *rusem* is found in Manipur and contiguous provinces seems to be of great organological implications, as instruments based on the principles of the *khung* are found also in Laos and Burma. More sophisticated than these are the *sheng* of China, the *sho* of Japan and the *shaenghwang* of Korea. One immediately notices that all these wind instruments, including the Indian *rusem*, have a close organological and ethnological relation in East Asia and among the Mongoloid people. This fact becomes of greater importance if we remember that the harmonium might have also been developed from these simple single free reed aerophones. (31)

The principles of the harmonium are usually traced to the mouth organs described above. The Chinese *sheng* is known from about a thousand years before the commencement of the Christian era and pictorial representations of it from the sixth century after Christ. The Asian mouth organ travelled to Russia from where the single reed was introduced to Western Europe in the nineteenth century A.D. Instrument makers in the continent started making many kinds of mouth organs, reed organs and accordians, using the free reed. The reed organ then came to India with the western invaders, traders and proselytizers and has taken the form of the Indian harmonium. A full circle has thus been traced: from the Indian *rusem* to the Indian harmonium.

The harmonium comprises four working parts: the bellows, the air chamber, the keys and the reeds. The first is a set of folded leather pouches which can be pressed and released by means of a wooden board attached or, as in the case of the 'leg harmonium', operated with two pedals by the feet. The bellows have holes to let in air from the atmosphere and also leather valves to prevent it from going out. When the player opens them, wind rushes in and when he presses them, it is prevented from flowing out back into the atmosphere but is pushed in the air-reservoir. This latter is the squarish chest which forms the bulk of the instrument, and acts as a resonator as well. Here also leather flaps operate between the air box and the bellows so that air can get in and not get out. By sustained and repeated movement of the bellows, air pressure inside builds up and can be released only by pressing the keys (the black and white stoppers seen on the instrument). When any key is pressed, it opens out a small vent under the connected reed and air rushes past it, producing the required note. There is thus one key to every reed and only the notes needed can be played by depressing the related keys. The row of black and white keys is called the keyboard; therefore the harmonium is also classed with keyboard instruments such as the piano and the harpsichord.

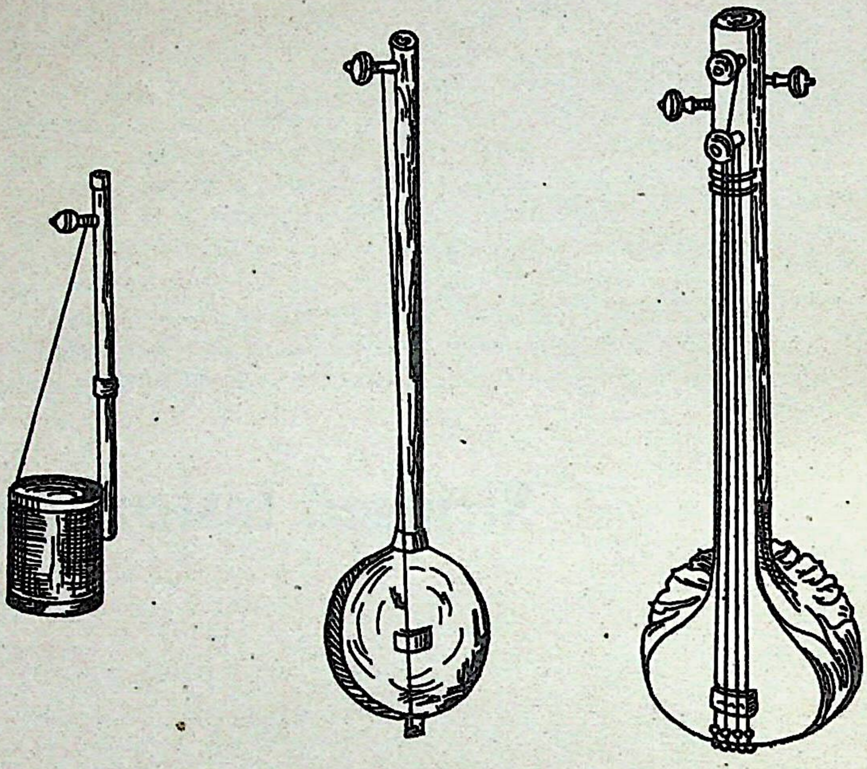
This instrument has been the cause of much controversy and acrimony amongst scholars and musicians, both in official and non-official quarters. We need not put on the judicial mantle here but, rather, examine the pros and cons of the controversy. Let us take the pro-harmonium arguments first. It is an instrument that is convenient to handle and its playing technique is not as difficult as most instruments such as the *sarangi*, the *sitar*, the *veena* and the violin. No special care is needed to tune it; indeed, one just plays it 'as it is'. These factors have made the harmonium very popular—particularly its loud sound—and many great musicians have permitted its accompaniment. This is specially so in Hindustani music where sustained notes are frequent; Karnatak musicians have kept it almost out of bounds. Those who would reject it argue that in spite of its evident conveniences and "mass appeal" it has none of the capacities to generate sounds and tonal dynamics so essential to Indian *raga* music. The profundity and beauty of our music, as far as tonal appeal goes, consists in fine distinctions in *svara* or pitch values and *gamakas* or ornamentations. Now, *raga* music employs extremely fine shades of pitch which not only add an inner glow but most often are a necessary differentia of *ragas*. The harmonium is not constructed to generate such razor sharp differences. On the contrary: its keyboard necessitates a process of 'democratization'—what is technically known as equal temperament. That is, the musical scale is divided into twelve 'equal' steps (seven white and five black keys), whereas Indian music cannot dispense with an almost infinite number of keys to give all the niceties of pitch.

In other words, on a harmonium tones lose their individual uniqueness and become one in a crowd. Further, since there is one-reed-to-one-note relationship only discontinuous and *staccato* melodies are possible. The glide from note to note, the delicate oscillations of which there are innumerable varieties—all collectively termed *gamaka*—are not possible on the harmonium. And a *raga* without them is a barren tree bereft of foliage and flowers. One may then produce all *ragas* on this instrument conveniently, but none accurately. These are, then, the arguments from those who would ban the reed keyboard instrument, lest it should eat into the very vitals of our music.

VI

Stringed Instruments

Tata vadya are so many in number and variety that it is futile to search for their beginnings and sometimes even classification becomes complicated. Today there are in the world harps, lyres, psalteries, dulcimers, zithers and lutes and in each class there are so many varieties; methods of playing these are also numerous. It is therefore only natural to suppose that stringed instruments might have grown out of many kinds of tools and contraptions. There are various theories about this but none entirely comprehensive nor completely accepted. Some have traced the source to the hunting bow, some to ground harps, some to bamboo zithers and thus the search and discussions have gone on. The hunting bow is an ancient and familiar tool and many harps are believed to have really evolved out of this. The 'ground harp', a primitive instrument, is a pit in the ground covered with animal hide; a flexible wooden pole is planted by the side of the pit and from the free end of this a rope is tensed into the leather, thus bending the pole like 'half' a bow and the rope like a bow string; this rope is plucked. The instrument, known as the ground harp, has so far not been observed in India. The bamboo zither is a small length of bamboo; its skin is spliced into two thin strips without detaching them from the body, raising them by two small strips of bamboo and striking these 'strings' with a small stick. In our country this instrument, which might be the mother of all zithers, is known as the *gintang* (Assam), the *ronza gontam* (Andhra) and by other names. The



32. The string drones: *tun tune*, *ektar*, *tamboora*

evolution of chordophones has thus come by so many devious paths and ways that we need not here enter into the complicated maze.

There are three major classes of stringed instruments. One group of these is not used for creating a melody or a *raga* but is employed as drones and rhythmic adjuncts. Another family which we may term polychords, comprise harps, lyres, dulcimers and similar instruments on which melody can be played but wherein there exists a one-string-for-one-note relation. Then there is the largest genus: that of monochords; that is, one string is sufficient for playing the whole melody. Be it noted that there may be more than one string on the instrument; but every one of them can be used to produce a melody independently of the other strings. Monochords may again be fretless, fretted, with a short or long 'neck', plucked or bowed. Thus the types available to us are innumerable; so we shall study some of the more important specimens. If these are compared to the *sushira vadya*, a kind of resemblance and parallelism make themselves evident. The harmonica and the pan pipes (*fefli*) are like the polychords where a reed or tune is necessary for every note. Analogous to the monochord is a flute or a *shehnai* where an entire melody can be got out of one length or column of air.

Of the drone class one common example is the *tun tune* or *tun tina*. This is an instrument found particularly in south-central and western India and is a companion of mendicants and beggars. It has a small body: a hollow wooden cylinder of nearly twentyfive centimeters height and fifteen to twenty centimeters in diameter, with the bottom of the vessel closed by parchment. A bamboo piece of nearly seventyfive centimeters length is nailed or screwed to a side of the body on the outside. The top of this bamboo arm bears a single peg and between the peg and the leather bottom passes a single string which can be tightened or loosened by twisting the peg. The singer holds the *tun tune* in the hand and plucks the string with his forefinger, to give the base note and a kind of rhythm. A very common musical situation in which the *tun tune* is found is the *tamasha* play and *povada* ballad singing of Maharashtra. **(32)**

A close relative of the *tun tina* is the *gopi yantra*, also sometimes called the *ek tara*, of Bengal and Orissa. This is an instrument seen invariably in the hands of *bauls* who are a type of itinerent musicians who sing of the *guru* and the Eternal Lover and are deeply dedicated to Vaishnavite *bhakti* and *sufi* ways of expression. They go from village to village with their *baul* or *dehatatva* songs on their lips to the twang of the *gopi yantra*, the *khamak* and a small conical drum, the *bayan*. The *gopi yantra*, like the *tun tina*, has a wooden resonator with a leather bottom; but the bowl, though almost cylindrical, is wider at the base and narrower at its upper end. Unlike the *tun tune*, the string is not attached to one bamboo rod and a peg, but a bamboo fork whose prongs are nailed to the outside of the resonator; usually there is a peg at the top. The single string goes from the top of this holder between the forks to the leather bottom. This instrument is a little more versatile than its cousin, as it can produce finer sound effects to suit the rhythm of the song and the jig. The bowl is held under one arm and the palm of this hand holds also the fork. While the string is plucked by one hand with a plectrum, the fork is pressed and released thus altering the tension on the string and the leather base, and hence their pitch and quality. A very beautiful 'vamping' is the effect.

The *premtal* (Hindi), the *khamak* (Bengali), the *chonka* (Marathi) and the *jamidika* (Telugu) are all of a class of instruments similar in some respects to the *tun tune* and the *gopi yantra*. There is an important constructional difference which will become evident as we describe it. Functionally also this group is only a rhythmic one in contrast to the other two instruments which are used essentially as drones to give the basic tone to the melody. The more primitive kind has a bottle gourd resonator, but wooden cylinders are also common. Like the *tun tina* and the *gopi yantra* there is a leather bottom through which a gut string of about

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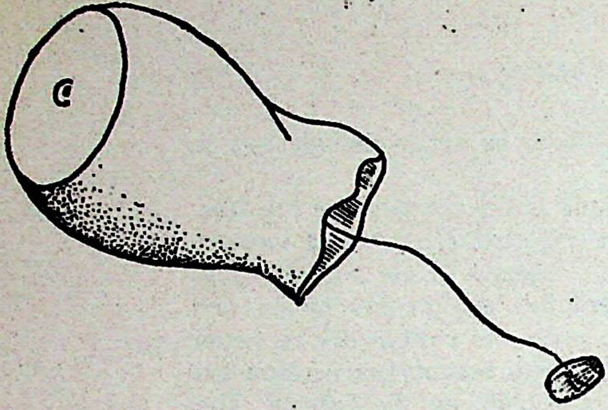

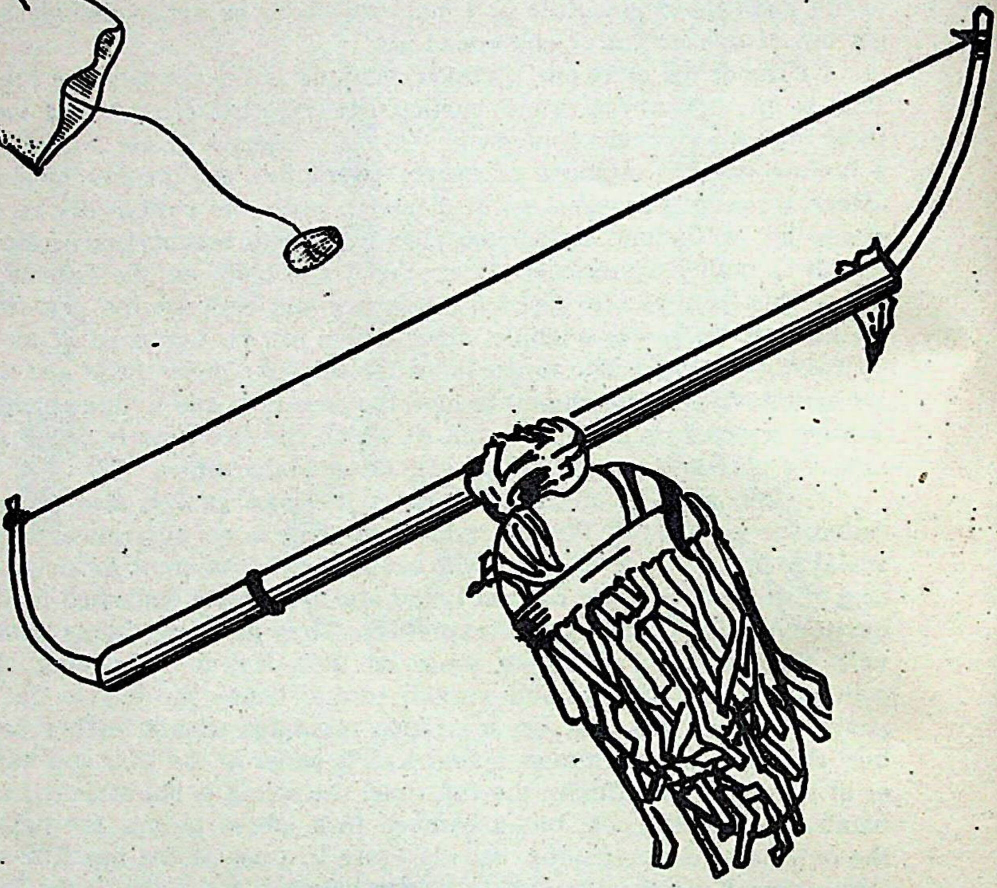

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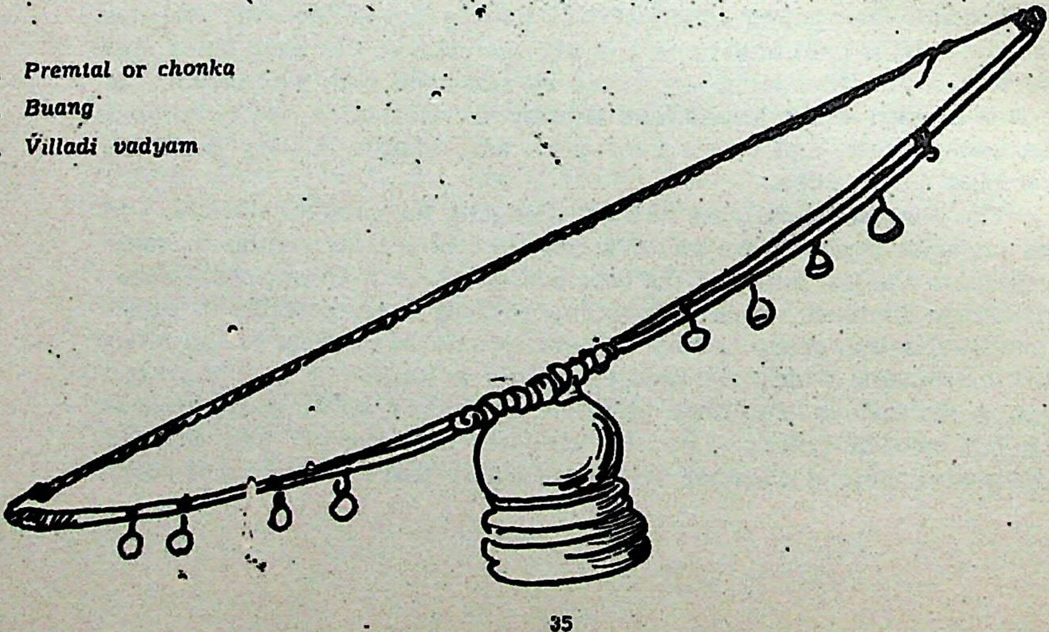
33. *Premtal or chonka*
34. *Buang*
35. *Villadi vadyam*



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sixty centimeters passes out through the vessel. Here the resemblance ends, for there is neither a bamboo rod nor a bamboo fork to hold this gut. To play it, the musician holds the body of the instrument under the arm and the free end of the gut in the fist of the same arm; this free end has a wooden block with which to hold the gut tense. With a wooden plectrum in the other hand he plucks the string and as he does so jerks the hand holding it a little, almost unnoticeably. The result is a weird tonal and rhythmic effect which can hold you for hours. These instruments are used by snake charmers and ballad singers. **(33)**

The Santals of Orissa have a rhythmic chordophone which they call as *buang*. The size of this instrument varies, but usually it is about a meter long and consists of a bamboo tube, a resonator and a rope. The 'sound box' is really an egg shaped bamboo basket pasted over with paper: any odd paper like newsprint to coloured tissue paper cut into beautiful strips. This covering not only makes the basket more effective in reinforcing the sound but gives it a charming shape and colour. The basket is merely tied below the bamboo tube more or less centrally. From the two openings of the tube curved wooden pieces—often bent branches of a tree cut to a few centimeters—are inserted, one at each end. A hempen rope is tied across these curved protrusions, and the instrument is ready. Generally two or more *buangs* are played in a group dance, though there does not seem to be any restriction on the number. The dancer just holds the bamboo tube in one hand, pulls and lets go the rope, giving a *boom boom* sound. The *buang* is an extremely primitive and simple instrument but the attachment of basket and other features may well have been the progenitors of pumpkin and wooden resonators of more developed zithers. **(34)**

We now come to the drones of greater sophistication, the crowning glory of which is the *tamboora*. The major classes are the *ek tar* family and the *tamboori* group which are only the cruder prototypes of *tamboora*. The *ek tar*, called the *eka nada* in some languages, is a single stringed instrument as its name implies. The resonator is a flat dried pumpkin and the *danda* or the hollow rod holding the string is *inserted* into it. This is an important fact that has to be carefully borne in mind for it is the beginning of the lute forms like the *sitar*, the *sarode* and the *Sarasvati veena*. It will be recalled that in the *buang* the basket was below the *danda;* such an attachment leads on to the zithers like the *Rudra veena*, *vichitra veena* and similar instruments. Coming back to the *ek tar*, the *danda* projects a little from the bottom side of the gourd. On the projection there is a small hook from which the metal string passes over the body and is twisted round a peg at the distal end of the bamboo tube. A tiny thin bridge of wood or bamboo is placed on the resonator under the string. The *ek tar* is plucked with a to and fro movement of the forefinger. The instrument is a companion to the beggar and the *bhajan* singers.

The word *ek tar* is often a misnomer, because there are many folk drones like the *ram sagar* of Gujarat, for instance, which have two strings but yet are called *ek taras*. The apellation in a few cases might lead to a little confusion; for example the *gopi yantra* which is structurally very different from the instrument described is also known as *ek tar*, as it has one string. (32)

The next stage in the development of the drone may be seen in the *tamboori*, a common instrument with wandering mendicants in the south. This small stringed instrument is about a meter in length and hence it is portable. The resonance box is made of wood and is spherical in shape having an upper covering made out of a plain flat plank. This hollow body has a small neck which continues as a short *danda;* the *danda* terminates in a scroll with the motif of a snake's hood. Passing from the lower end of the resonator vessel, over a bridge on it, to the pegs near the scroll are four strings of metal which are constantly strummed to accompany the singer.

The *tamboori* evolves into the concert *tamboora* or *tanpoora* which is perhaps unequalled in richness by any other instrument; the number of overtones generated from each string and the combination of these are so great that the sound quality almost defies analysis. It is this luxuriance of tone that gives a background for any number of consonances and dissonances with the voice or other instruments in a concert. Yet the structure of the *tamboora* is simple. The sound 'box' is a large pumpkin of about ninety centimeters in girth; this fruit with a particularly hard shell is grown extensively in Maharashtra, near Pandharpur, though a certain amount was imported from African countries like Zanzibar (Zaire). The fruit is allowed to dry, usually by hanging it well above a smoky fire for some years so that it gets sufficiently seasoned. It is then cut to the required shape and the descicated inner pulp removed. The cut open part is now covered with a thin plank of wood and the resonator is ready. A wooden neck—a very short one—is fixed and to this is attached a long hollow fingerboard or *dandi (danda)*. The total length of a low pitched *tamboora* used by men may be roughly one hundred and fifty centimeters; the high pitched one used by women is much smaller. There are four metallic strings in the instrument and these are plucked with the fingers to provide the drone; no melody is played on the *tamboora*. The northern and the southern varieties differ a little; the kind we have just described is the north Indian *tamboora*. The one used in the south is smaller in size and does not use a pumpkin but has a bowl made entirely of wood, instead. Whatever be the regional variety, the bridge of the instrument is of a particular interest. This is wide, unlike those seen in the *sarangi*, the *sarode* or the violin and is made of ivory, stag horn, camel bone or hard wood; it has also a special curvature. But the most important element is the small cotton, wool or silk thread inserted between the bridge and the strings. This thread, known as the *jeevan* or *juari*, has a special place and only when it is there and drawn correctly does the string emit its rich sound; otherwise the tone is dull. Perhaps, this wide bridge and the *juari*, in ancient times called the *jeeva* or 'that which gives life' to the sound, is one of the best gifts to the world of instrument making. The *jeeva* has been known in India for at least a thousand years now and was a bamboo slip in its infancy, employed mainly in the *eka tantri* (not *ek tar*). (32).

From the foregone descriptions it may be possible to conclude that the evolution of the *tamboora* can be traced to simple folk drones. But textual and archaeological evidences which are datable are not profuse nor are they always reliable. In many cases musicological writing lacks the support of scientifically discussable material. For instance, the *tamboora* is invariably connected with the sages Tumburu and Narada, both mythological characters; and even if they were historical figures, nothing of their history is known. Having linked these *names* with the word *tamboora*, it is natural that the evolution of the instrument is traced to times beyond known history. It is probable that the lute got its name from the words *tumbi* or *tumbi phala*, referring to a pumpkin. The present form of the *tamboora*, may have emerged in about the sixteenth century and has not changed much except for the addition of strings and the manner of tuning.

We now enter into the study of melodic stringed instruments which is an extensive field as also one which has had an indelible influence on the course of Indian music. It may not therefore be out of place to a say a few words on this, though we may not go into the detailed controversial technicalities of the subject. For our purpose it will be enough, to take note of two of the very major genuses of *tata vadya*. The first may be called the polychords and the other monochords, which were briefly discussed at the beginning of this chapter. Because of the basic differences in structure and in the musical potentialities of each class, two fundamentally different tonal systems were developed in India. Each had its own terms of reference, though during the process of historical change the two musicologies often got mixed up and textual studies lead to much controversial confusion. Since the polychords had a one-string-one-note correspondence, theories of music based on discrete tones and shifts of musical scales as was possible with harps were developed. This was called the *moorcchana paddhati* or the system of modal shifts. On the other hand, instruments like the *eka tantri*, the *sarode*, the *sitar* etc. had a one string-multi-note relationship. The process of fretting reduced all tonal measurements to their positions on the string. This naturally led to another system founded on fret positions and to a theory known as the *mela paddhati* (the method of scales). The former practice of musical scales held sway till about the fifteenth century; but in due course the latter gained ground and eventually replaced the other. The theory of scales and *ragas* we now follow both in Hindustani and Karnatak music rests on the *mela paddhati* which in turn depends on the fingerboard instruments or monochords.

The polychords, also called *veena*—with or without prefixes or suffixes—are the most ancient stringed instruments known in India. But no universally accepted theory of their origin has so far been formulated. The most popular hypothesis is that bow shaped polychords, known as harps in English could be traced to the hunter's bow. It is believed that the twang of the bowstring might have given an idea of its musical use to primitive man. Naturally, this being only a single string, it may have served initially only as a drone and rhythm keeper, as in the case of the *buang* described earlier. By attaching a set of parallel strings to the same bow different notes were obtained, thus producing a harp.

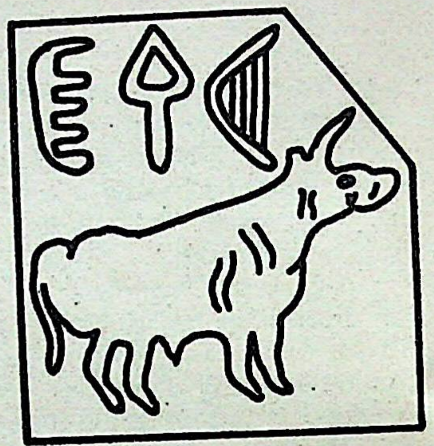
The *villadi vadyam* found in Tamil Nadu and Kerala is an example of a bow shaped instrument; the name indicates this, for *villu* in Tamil and Malayalam means a bow and *adi* is to strike. In other words, it is a struck bow. The *vadyam* is very simple and is made of a bow, nearly two to three meters long. The bow-string is a hemp or leather strap. This *villu* is kept on an inverted earthen pot which serves as a (detachable) sound amplifier. The bowstring bears a few sets of bells which jingle as it is struck. The *villadi vadyam* is an accompaniment to certain kinds of ballads known as the *villu pattu*. The principal singer sits near the *vadyam* with the instrument in front of him. As he sings the song he beats the rhythm on the rope with two heavy sticks. With the resonance of the mud pot and tinkling of the *gejjai*, the *tala* is exciting. There is also a chorus which keeps him company in song and rhythm, giving time with clappers, cymbals and the *udukkai*. (35)

There are two kinds of polychords being discussed: they are the harps and the lyres. A harp can be visualised as a bow with a number of strings all running parallel to the 'bowstring'; this, of course, does not commit us to thinking that they originated from the bow, for what we are talking of is the shape and construction. The lyre, on the other hand, is differently made. Here also the body of the instrument is 'bow shaped'; but the 'bowstring' is replaced by a rod known as the cross bar. From this cross bar and perpendicular to it, run a series of strings fixed at one end to the crossbar, and at the other end to the 'bow'. The harp and the lyre so made are poor in the volume and the quality of sound; it therefore becomes necessary to add a sound box to augment these. In the most primitive stage the bow is held near the mouth of the player and struck. The hollow cavity in the partially opened mouth acted as a reinforcer as in some African instruments. The placement of a temporary sound amplifier is the next step, as was seen in the *villadi vadyam* wherein the bow was kept temporarily on an inverted clay pot. A permanent resonator then replaces the temporary one: gourds are tied to the *dandi* or the bow rod, or inserted into the pumpkin. A further sophistication is achieved by fabricating a wooden bowl, instead of using a natural gourd, and covering this with leather or even wood. We will later see almost every type in Indian harps, zithers and lutes.

Lyres, perhaps, never existed in our country. So far no description or illustration has come to light, except, for a solitary example found in the Indus heiroglyphs. In one of them, a diagram more or less resembling a lyre has been found; but it is still a matter of conjecture whether it is a drawing of a lyre at all.

Harps, however, have been traced to these prehistoric times. There are a few seals and inscriptions in which bows with three or four 'strings' have been drawn and these are in all probability bow or arched harps. In any case, the drawings are so stylized that we are not able to form a definite or detailed idea of the construction or tuning of these instruments. **(36)**

The word *veena* seems to have been first used in the *vedas*. In the *Asvamedha* sacrifice they used the *veena* as an accompaniment to chant and the *veda* extols it as; "This, the *veena*, is verily the embodiment of Beauty and Prosperity". Evidently it was also played particularly at dawn, for there is an anecdote in the *rig veda* which goes thus: Once the demons imprisoned the sage Kanva in a dark room and blindfolded him. The condition for his release was that without using his eyes in any manner he should be able to tell the coming of dawn. Hours passed and then the sage heard the gentle sound of the *veena* and he knew that day had dawned. He told his captors—without, of course revealing the source of his information—and he was set free. There are numerous poetic descriptions of the instrument in all our literatures. In the *Ramayana*, Hanuman visits the seraglio of Ravana in his search for Sita. There, at midnight, he sees many musicians asleep. The poet likens one of the women *veena* players embracing her instrument to a cluster of lotus stalk clinging to a boat, in a river. Then there is the famous story of Prince Udayana who charmed Princess Vasavadatta by the music of his *veena* and, in the course of wandering, even a wild elephant. Like the *damaru* with Siva and the flute with Krishna, the *veena* has also certain iconographic and occult significances. One of them is again in relation to Siva in the form of Dakshinamoorty who is very often referred to the *Veenadhara* Dakshinamoorty. He is frequently shown holding a fretless *veena* with a single gourd, resting on his chest and teaching the Wise Ones like Sanaka. Above all, the *veena* is the instrument of Goddess Sarasvati. She is the Goddess of all muses and is the *veena pustaka dharini*: one who holds the divine source of sound and wisdom. No picture, icon or poem of her is therefore complete



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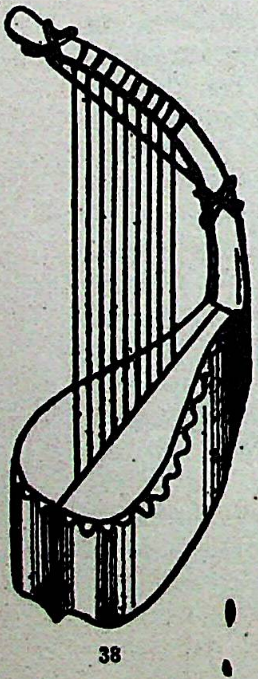
36. A prehistoric harp, from an Indus valley seal

37. Ancient *sapta tantri veena;* from a Sculptural relief.

38. A Yazh. Possible reconstruction (after *Tamil Kalai* Kazhanjiyam)



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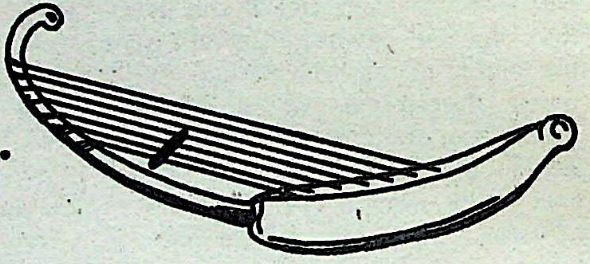

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without the *veena* and the *pustaka* (book). But even she has not the capacity to fathom the depths and extent of the ocean of *Nada*, the Primordial Vibration. "Even Saraswati cannot know the Infinite Magnitude of the ocean of *Nada*. Being afraid of drowning, she holds the gourd (of the *veena*) to her chest (as a float)." Any comment on this grandeur would be banal.

The best known of the *vedic veenas* was the *vana* or *maha veena* (the great *veena*) of one hundred strings of *munja* (grass) and was played with two bamboo pieces. There were ten holes in the *danda* of the instrument and from each emerged ten strings, thus totalling a hundred. Thirty three of these were fixed by the *adhvaryu* (an officiating priest) and an equal number each by the *hota* (the sacrificial priest who chanted the *rig veda)* and the *udgata* (the priest who chanted the *sama veda*). The final hundredth one was tied by the *yajamana* (the householder) who was the patron of the sacrifice. The *udgata* seated himself on a high seat, *asandi* (a raised seat), and the others on grass mats during the *yajna* ritual and chanted the *mantras*. In later literature this instrument is generally equated with the *sata tantri veena* which means the "*veena* with hundred strings." Some are of the opinion that the *vana veena* might have been the prototype of the Kashmiri *santoor* which will be described later.

It would not have escaped the reader's notice that the strings of these early *tata vadya* were not of metal but were made of spun grass (*munja*). Animal sinew was also used for similar purposes and these have been replaced by metal wires in most cases. It may be recalled that the Tamil word for *tata vadya* was *narampu karuvi*, and *narampu* means animal gut. There is a delightful story of *Kanakapura* (the City of Gold) in the *Birhat katha sarit sagara*, in which the Prince asks Bindumati the reason why so noble a lady as she had become a fisher woman. Bindumati, the fisher girl and wife of Saktideva says, "But listen, I shall tell you why I have become a fisher girl. In a former life I was the daughter of the spirits of the air, while now I am cursed to a sojourn in the realms of mortals. But once when I was still a spirit, I used my teeth to bite off a piece of sinew to make the string for my lute (*veena*). This caused me to be born in a dwelling of fishers! Just because my mouth touched the dry sinew of a cow I have fallen so low now. What fate is there in store for one who eats the flesh of cows?". Now a days metal strings have by and large displaced guts and grass. This is particularly so in instruments which are plucked and also those in which the wire is deflected sideways as in the *sitar* and the *veena*. But in bowed instruments such as the *sarangi* animal sinews have not yet lost their preference.

Reverting to the subject of harps, ancient music and musicology relied much on two of them: one was with seven strings and the other with nine. There might have been regional and structural types, because one often notices a mix up of names and instruments: for instance the harp with seven strings had more than one name—the *chitra*, the *parivadini*, and the *saptatantri veena*. Since detailed information about these is lacking, it is difficult to say whether they were different except in the number of strings or whether they were the same instrument but known by various names. *Chitra* was the best known and is referred to in the *Ramayana* on many occasions. The nine stringed harp was the *vipanchi* which, besides having more strings than the *chitra*, was different in another way. While the seven-stringed *veena* was plucked with the fingers, the nine stringed one was played with a small wooden piece called the *kona*. Like the *chitra*, the *vipanchi* also finds a place in the epics.

Though at the most primitive stage the harp had perhaps only the stretched string across the bow, in more developed forms it was fitted with resonators and a proper bow like or straight stick to hold the strings. One very important fact we cannot help noticing is that in India none of these *veenas* had any pegs. The gut or metal string passing out of the resonator was tied to a leather strap which in its turn was wound round the string holder. The leather winding was moved slightly up or down this holder to alter the tension and hence the pitch of the string. It must be conceded that this process was very efficiently worked out, as an extremely sensitive and complicated theory of tuning was practised in ancient music and this depended almost entirely on harps. The resonator or sound amplifier might have been gourd which later on might have given place to a boat-shaped wooden dowl, wholly or partly covered with skin or even a wooden plank. This body was called the *ambhana* or *doni*. Projecting out of this was the curved or straight wooden holder, the *danda*, onto which were tied the strings as described. A possible reconstruction of the ancient harp is given here. (37)

There is a beautiful analogy, in the *rig veda*, between the God-made *veena*, the human body, and the man-made one. "Just as the Godly *veena* has a head, a stomach, a tongue, fibres, tone, touch, and skin the man made wooden *veena* also has such organs. The head of the *veena* is the gourd, the hollow of the *ambhana* is the stomach, the act of playing is the tongue, the strings are its tendons, the music its speech, and as the human body is covered with skin so is the *veena*".

Early in the book we discussed the Aryan and the non-Aryan sociocultural bases of our civilization. So far the general opinion has been that the Dravidian (and naturally the pre-Dravidian) was different from the Aryan and there had been a later fusion; however, there are some very great men of insight who hold that to posit the existence of such cultural complexes is wrong and that the whole of India was populated by one people. The question of cultural contributions becomes more entangled when we come to the music of the land, for we are faced with even greater mist and fog of ignorance. By the time the first texts were written and visual depictions chiselled, an indistinguishable mixture of life patterns has already taken place, though we can still make out a multiplicity of bases. This was not only intra-national but inter-national as well, because it is probable that some of the instruments we had, came to the 'Dravidian' land from far off countries such as Egypt, Arabia and Greece. Setting aside these complications and with the above reservations in mind, Tamil literature of the very early period has to be tapped to obtain source information on a musical system which *might* have been separate from the Aryan. The major stringed instrument described here was the *yazh*. But was it different from the contemporary 'Aryan' polychord *veenas* described earlier? In some literary examples the words *yazh* and *veena* are used in juxtaposition and are used in the same context. This has made some scholars think that the *yazh* and the *veena* were different. On the other hand, *yazh* has also been termed as the *veenai*, for example the *makara yazh* which was also known as the *makara veenai*, and this lands us back in a hazy situation where we are not in a position to decide on the 'Aryan-ness' or otherwise of the ancient Tamil instruments. This is more so when we see that even the constructional details of the *yazhs* and the Sanskrit *veenas* were almost the same. Cultural aspects apart, many savants have studied old classics like the *Pattu pattu*, *Silappadikaram*, *Manimekalai*, *Jivakachintamani* as well as archeological evidences and have given us fairly detailed accounts of these *yazhs*. (38)

Most probably the *vil yazh* was the first of these *narampu karuvis*. An early writer, Kannanar, describes a hunter who made a bow out of the hollow branch of a *kumizh* tree, tied a hempen rope to it and to the accompaniment of this *vil yazh* roamed happily singing the *kunrinji pann*. (*Panns* were melodic forms analogous to *ragas*). Later were invented the other harps with more *narampus* or guts. The *senkotti yazh* had a resonator which, most likely, was covered with a wooden plank and its *kotu* (comparable to the *danda*) seeems to have been a straight tube instead of a curved one; it had seventeen strings. The *sakota yazh* bore fourteen strings of which four were tuned in the lower register, seven in the middle octave and three in the upper one. The *peri yazh* might have been a large sized harp with a boatshaped *pattar* (an analogue of the *ambhana*) or resonator closed with leather and having twenty one strings. The *seeri yazh* was probably a smaller version of the *peri yazh*. The *makara yazh* or the *makara veenai* had nineteen *narampus*. It was an instrument of the aristocracy, played in their mansions and seraglios. Tamil writers themselves have called it as a *avanakkai veenai*, meaning an instrument of the Yavanas who are usually taken to be Greeks. However, it is quite possible that it might have reference, as it often did in other parts of India, to any 'foreigner'. It may be noted that there was a Grecian harp with a very similar name: the *magadis*. This was, as the Greeks considered, a Lydian and an ancient instrument. Anacreon, a Lydian poet of the sixth century B.C. in his lyric says:

> "O Leucasis, I play
> Upon a Lydian harp,
> A magade of twenty strings,
> And thou art in thy youthful prime!"

It is, nevertheless, worth remembering that the Greeks hardly had any instruments of their own and the ones they did have were mostly imported from outside their land. The *magadis* perhaps went to them from Mesopotamia or Iran and the harps were in general considered as having come "from the Orient". Plato even condemned them as enthusing '*hedone*'—that is, sensory pleasure. The *makara yazh*, then, might have travelled to south India either directly from west Asia or from that area via Greece. The *makara veena* seems to have reached Indonesia much before the tenth century A.D. as the Jalatund reliefs (East Java, 977 A.D.) shows a *makara veena* with a resonator having the face of a 'crocodile' (*makara*). Even in Indonesia this *veena* 'may have been confined to the ruling castes and may never have been in vogue among the lower classes'. Tamil Nadu had also the *adi yazh*, the 'first' *yazh*. Legends say that it was played to win over *rakshasas* or the evil ones during the first *yuga*, the *krita yuga*, the first 'era' of the world. It was said to have one thousand strings arranged in five octaves with two hundred in each! How far this was a real instrument and how far the number 'one thousand' was a hyperbole we do not know. This *adi yazh* was perhaps the same as the *perum kalam*. The *yazhs* were certainly very popular and important instruments those days, comparable to the *sitar* today, as is evident from the innumerable references in Tamil literature. In the *Silappadikaram*, the chapter *Kanalvari* (Song of the Seashore) opens with the meeting of Madhavi, the courtesan, with Kovalan, the hero. "After worshipping with her hands, Madhavi removed the *yazh*, faultless in the *pattar*, the *kotu* and the strings, from its embroidered case, its body adorned with flowers, which looked like a beauteous bride with black eyes darkened with collyrium. And she began to produce its eight different sounds ... in order to satisfy herself of their correctness. Her lustrous little fingers ornamented with ruby rings and manipulating the various strings resembled a hive of humming bees. Next she tested by ear the eight different melodies ... Passing the instrument to Kovalan's outstretched hand, she said, 'It is not my object to command. Please let me know the rhythm'. He too began playing odes to the Kaveri river, and songs appropriate to the seashore (*kanalvari*) to the great delight of Madhavi".

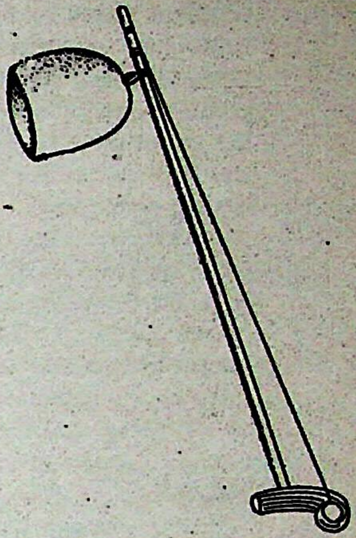
Some harps seen in the ancient monuments of Bharhut and Budha Gaya have five strings. However, the more common ones bore seven as are depicted in the sculptures and reliefs at Pitalkhora near Ajanta (3rd century B.C.), Sanchi in Madhya Pradesh (2nd century B.C.) and Amarayati as well as Nagarjunakonda both in Andhra belonging to about the third century A.D. Strange as it is, no harps of any kind have been observed in Karnataka even from the earliest times, though archeological evidence has shown them in the surrounding areas of Maharashtra, Andhra and to some extent in Tamil Nadu. One other interesting example is the inscription of harps on coins, the best known being the coin of Samudra Gupta. As the noted historian, Majumdar, puts it, "Brilliant both as general and statesman, Samudragupta also possessed many qualities of head and heart better suited to a life of peaceful pursuits. According to the Allahabad inscription he was not only a great patron of learning but was himself a great poet and a musician. His poetical compositions which earned him the title of 'king of poets' have not survived, but we have a striking testimony to his love of music. In one set of gold coins the great emperor is represented as seated cross-legged on a couch, playing on a *veena*... which rests on his knees. The royal figure on this unique type of coin was undoubtedly drawn from real life and testifies to his inordinate love of music." Again much of such sculpture so far indicated relate to Buddhist tradition which again may be significant in that the instruments might have travelled south along with Buddhist proseletysers, the armies of Buddhist kings and traders from the north. The majority of these scenes depict the life or the lives of the Bodhisatva. The Great Departure of Lord Gautama when he leaves the royal mansion in the dead of night in search of wisdom and understanding is a favourite with artists. The Nagarjunakonda reliefs, for instance, show this incident with much poignancy. Musicians and dancers are greatly fatigued and in deep slumber as Gautama departs. Harps, drums and flutes are lying idle on the ground or in the laps of women who are too sleepy to notice his going.

The harps described thus far belonged to a class of polychords which were bow shaped or arched, with a resonator and an arm *(danda)*. There is another category which we may term as the box type. Here there is no special *danda* apart from the sound box. The strings are stretched on a wooden chest which acts both as a rest for them as well as a resonator. India has today two such instruments: the *santoor* and the *svaramandal*.

The *santoor* is characteristic of the Kashmir valley and is neither seen nor played anywhere else. In the West it is known as the dulcimer or the cymbalon. Some scholars are of the opinion that this instrument can be traced to the *vedic vana veena*. It may be remembered that the *vana* had a hundred strings (of spun grass) and was probably played with sticks. This was later called the *sata tantri veena*—the *veena* with one hundred strings—which name, they say, got modified to *santoor*. Etymology apart, the modern *santoor* does have a large number of strings and is struck with sticks. The instrument is made of a box of wood, trapezoid in shape. Over this there are thirty bridges, arranged in fifteen rows, two in each row. A set of four strings of metal tuned to the same note is stretched over each pair of bridges; thus the total number of wires is sixty. The musician sits with the *santoor* in front of him and strikes them with a pair of flat wooden pieces curved at the striking end. Kashmiri musicians commonly play *maqams*, somewhat like the Persian modes, on the dulcimer. However, it has also been used to play Indian *ragas* and is now much in demand with film musicians. (39)

The other box polychord still found in our country is the *svaramandal*, the Indian psaltery. This, like the *santoor*, is also a wooden box on which are mounted strings. In dimensions it is much smaller than its sister and has no bridges. There is only one string for each note, whereas the *santoor* has four tuned to one; and the strings pass over ledges, instead of bridges, onto tuning pins. They are plucked with fingers wearing metallic wire plectra. Today there are perhaps not more than three or four who can play *ragas* or even simple tunes on this instrument; but there are quite a number of Hindustani vocalists who strum it along with their singing to give a rich tonal background. This psaltery seems to be the ancient *matta kokila* which later on began to be called as the *svaramandal*. References to the *svaramandal* itself commence from about the fifteenth century A.D. and Hindi poets of later times often mention it; so does the *Ain-i-Akbari*. The polychord may also be the *qanoon* known to West Asia and to the Syrian as *qithoro* from about the eleventh century. Indeed the *Ain-i-Akbari* definitely states that the *svaramandal* is similar to the *qanoon*. "The *Sarmandal* is like the *qanoon*. It has twenty-one strings, some of steel, some of brass, and some of gut".

After a reign of more than three thousand years—from prehistoric times till about the tenth century A.D.—the polychords almost vanish from the Indian scene, except the *santoor* and the *svaramandal*. The monochords or fingerboard instruments like the *kacchapi*, the *rabab*, the *sarode*, the *sitar*, the Karnataka (*Saraswati*) *veena* which are lutes and the *kinnari*, the *Rudra veena* which are zithers take over and dominate the musical realm. An entire music and musicology are left behind, a system based on harps is given up and a new one founded on fingerboard *veenas* leading to our present practice grows, replacing the older music. This near revolution is one of the greatest mutations in our music history and is closely dependent on the evolution of instruments. The subject, though extremely fascinating, is outside the scope of this book.



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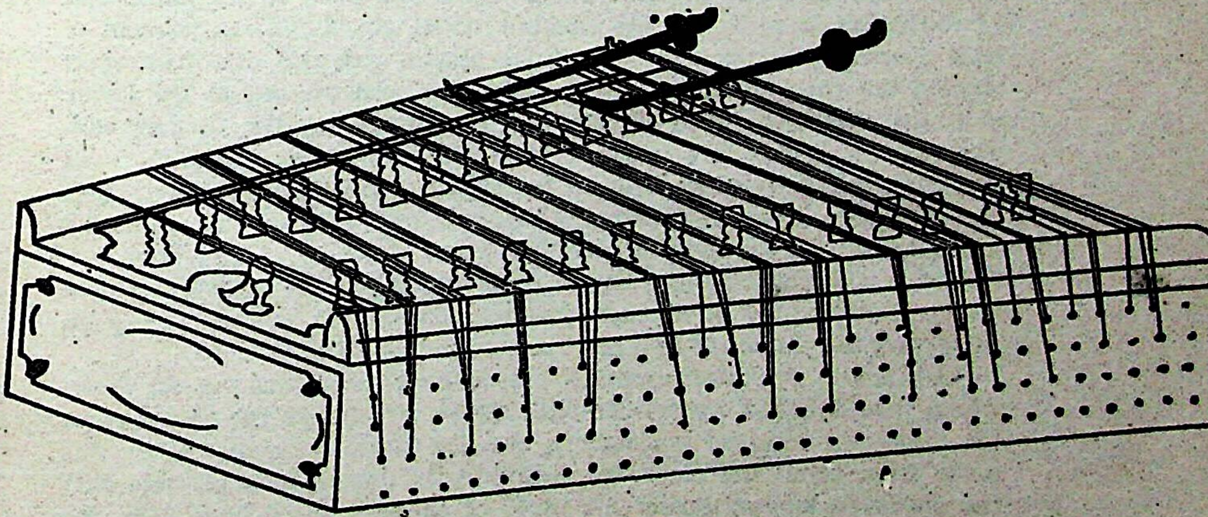
39. *Santoor*

40. *Tuila*



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As we scrutinize our music works and other literature, the same old problem raises its head and confronts us: that of lacunae in information, insufficient description and the question of reliability of sources. Such being the case, one can at best give some suggestions on missing links and points to major milestones in the evolution of our instruments, as best as the situation permits. And nothing can be as baffling as the *avanaddha* and the *tata vadya*. As might have been noticed in the former, in the case of strings also names are used indiscriminately and data are mixed up. There were *veenas* with one string *(eka tantri)*, with two *(nakuli)*, with three *(tritantri)* and so on. But very often we have no way of knowing whether such names were of harps, zithers or lutes; and many times translators (particularly into English) have not distinguished between the three categories of *tata vadya*. Much therefore has to be taken with reserve, especially where zithers and lutes are concerned.

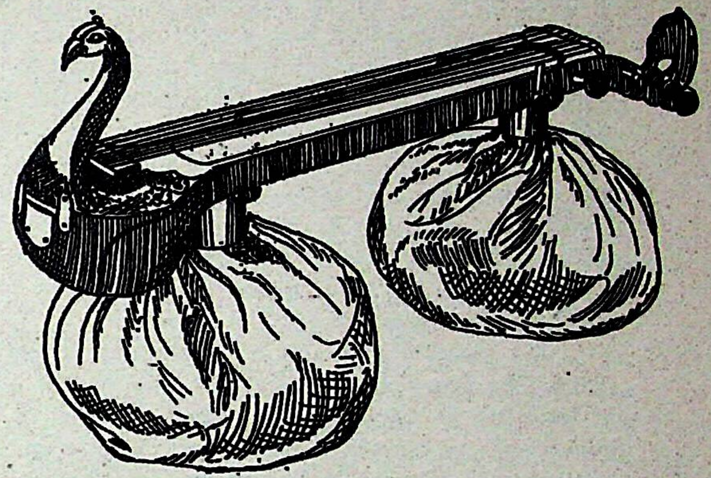
Zithers are those instruments wherein there is a fingerboard with strings, fretted or fretless, and, most important, the resonator being fixed below it.

The *gintang* and its clan are perhaps the earliest zithers that we know of, though it bears neither frets nor resonators. It is from this primitive instrument, generally called a bamboo zither (and which has already been described), that it is possible to derive all sophisticated ones. This organological hypothesis need not be discussed further here and the reader will have to consult more technical reports to study this problem.

One of the most simple instruments of this class is the *tuila* of Orissa. Even there it is fast disappearing and there are very few indeed who can play it. The body of the zither is just a bamboo stick along which is stretched a gut; there is neither a bridge nor a ledge (known as the nut) at the other end, nor is there a peg. Under the stick at the upper end of the *tuila*, there is a small half cut bottle gourd. The instrument is held diagonally across the body of the player with this dry fruit shell against the chest of the player. One hand plucks the gut at the lower end and the other hand is used for stopping it at the further end. The *tuila* is peculiar in a special way because only three fingers are used without moving them up or down the string to get the seven notes. (40)

From available descriptions we may hazard a guess that the *tuila* might have been a variety of ancient *alapini veena* which has been described as a *veena* having a *danda* of nearly nine fists in length and a gourd about twenty centimeters in circumference. It had one string (in some varieties three) of animal sinew, cotton or silk.

But a very important *veena* of pre-medieval times was the *eka tantri* which should not be confounded with the *ek tar*, though the names mean the same: one stringed instrument. The *eka tantri* is mentioned by this name from about the eleventh century A.D., though it is possible that the *ghoshaka* known during the times of Bharata might have been the



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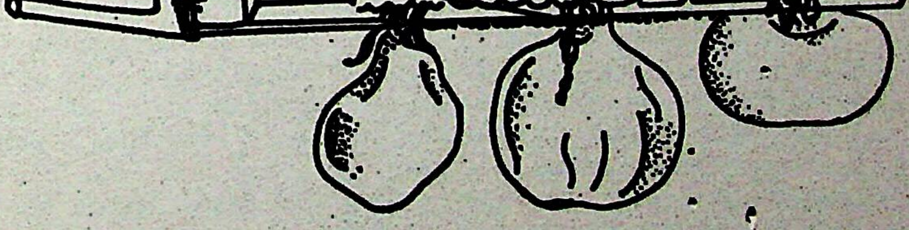
41. *Vichitra veena*

42. Tribal *kinnari* (After Furer-Heimendorf)



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same instrument. Great value seems to have been attatched to this zither for it was also called the *Brahma veena* and one writer goes to the extent of saying that Goddess Saraswati herself dwells in the *eka tantri*. The *danda* of the *veena* was approximately one hundred and forty centimeters in length and it had a *gourd* below the *danda*. Like the *tuila* and the *alapini*, this instrument was also held across the chest and the string made of gut was plucked with one hand. The other hand held a smooth bamboo piece called the *kamrika* which was pressed and slid along the string. The *eka tantri* had a wide bridge on it and under the gut was placed a bamboo slip which acted as a *jeeva* to enrich the sound. Musical texts also give elaborate instructions on the playing techniques of the right hand for plucking, the left hand for sliding as well as the combinations of the two. There are a few aspects that draw our attention here. First, the position of play—holding the *veena* across the body—continues to this day as in the *Rudra veena*. Secondly, the *jeeva* has been retained with profit in the *tamboora*. Thirdly, the practice of sliding the *kamrika* has now been adopted in the *vichitra veena* of north India and in the southern *gottuvadyam*.

The *vichitra veena* is a fretless zither played by Hindustani musicians. The fingerboard is a broad long one of about a metre and quarter in length with two large pumpkins screwed to its nether side. As in all contemporary *veenas* it has a wide bridge on one end of the *dandi* the other end having the ledge and four pegs bearing the main playing strings. There are two more wires, the *chikari*, which are plucked to lend the drone; the principal strings are also plucked with the fingers on which are worn wire plectra. To produce a *raga* a glass ball is pressed and moved over them, like the *kamrika* in the *eka tantri*. Underneath the main strings there are about a dozen or more thin ones called the *tarab*, which vibrate sympathetically when properly tuned and provide additional resonance. Both from its construction and manner of handling it is clear that this zither is a descendent of the *eka tantri*. The present name of the insrument is probably not more than a century old, though it is likely that it is the same as the *sar veena* which is listed as an important instrument in the *Ain-i-Akbari*. **(41)**

By fixing frets onto the *vichitra veena* group of instruments we get the fretted zithers of which the *kinnari* and the *Rudra veena* are the most famous. The first was a great favourite with musicians during the middle ages and the second one was the reigning *veena* in Hindustani music till a few years ago. These and other types of fretted zithers could be refinements of more primitive ones like the *memerajan* of the Savaras. As Verrier Elvin describes it, "Another instrument resembling a guitar is the *memerajan* or 'breast instrument'. A bamboo neck with four to six frets attached to it with beeswax. Two wire strings, spread apart, are passed over these; the first gives the melody, the second is a drone. Below there are two small gourds, cut out at the bottom, and secured to the bamboo neck by their close ends. The *memerajan* is held with the open ends of gourd towards the body; they are pressed against it or released to regulate the volume of the sound. The wires are plucked by the right hand while the left fingers the stops." (Elvin uses the words 'guitar' and 'neck' which are strictly not correct for while the *memerajan* is a zither, the guitar is a lute. Also there is no 'neck' in the *memerajan.*) The other nearer ancestors are the *jantar* played by the Bhopa community of Rajasthan and the *khing* of Kashmir. The first one is a largish zither with two big gourds. The frets are of bone and fourteen in number. The Kashmiri instrument is very much smaller and has only seven flat frets.

Of the ancient plucked zithers, the *kinnari* was of great importance. Though this has now vanished from classical music it can sometimes be seen now with certain tribes like the Chenchus and the Raj Gonds of Andhra. The instrument is probably the precursor or the same as the *brhat kinnari* to be described. There is a touching story of the Gond, Lingal, who went out in search of the tribal Gods. "The path was narrow and stony and led through dense forest; when at last he reached a clearing, he sat down to rest in the shade of a great banyan tree. Suddenly he felt wonderfully happy and taking his guitar *(kinnari)*, he played the eighteen tunes, and suddenly there was a rumbling in the earth and the palmyra palm in front of him trembled. Woken by the sweet strains of Lingal's playing the Gond gods in the cave Sursuryadi began to stir, and they said to each other 'What beautiful music! Certainly these are the tunes of our *Katora* (priest)' ... And Pahandi Kupa Lingal rejoiced. He knew that at last he had found his Gond gods". The *jogis* of Karnataka are a kind of religious sect who claim their descent from Arjuna, the valiant hero of the Mahabharata; and the kind of ascetic lives they lead is said to follow in the foot-path of this prince during his emeretic period. They go about singing their songs to the accompaniment of small *kinnaris*. The *kinnari* must have been quite popular, for not only is it described in some detail in many books but was also widely illustrated in medieval sculpture. The earliest assignable period for the *kinnari* could be about the fifth (?) century A.D. when one Matanga lived and wrote a book on music, called the *Brhaddesi*. Matanga is said to be the one who first mentions the fixing of frets to the *kinnari veena*. Definite descriptions of this instrument commence from the eleventh century onwards, and they give a fairly detailed account of this *veena*. There were two 'classical' *kinnaris*: the *laghu kinnari* and the *brhat kinnari*. As their names indicate the first one was small (*laghu*) and second was a larger (*brhat*) variety. There were also *desi* (folk) *kinnaris* of three sizes: *brhati* (big), *madhyama* (middling) and *laghvi* (small). The *laghu kinnari* used in classical music had a fingerboard of bamboo nearly seventyfive centimeters long, with two pumpkins. The frets, fourteen in number, were made usually of the chest bones of vultures and fixed to the *danda* with a mixture of wax and the ashes of burnt cloth. Over these passed a string of steel or brass and this was tensed by a peg on one side. The *brhati* was nearly twenty centimeters longer with a stouter bamboo. It had three gourds, instead of two, and was strung with gut. Abul Fazl in his *Ain-i-Akbari* gives very definite relations of the *jantar (yantra),* the *kinnari* and the veena. He says,

"The *Yantra* is formed out of the hollow neck of wood a yard in length, at each end of which are attached the halves of two gourds. Above the neck are sixteen frets over which are strung five steel wires fastened securely at both ends. The low and high notes and their variations are produced by the disposition of the frets.

"The *Vina* resembles the *Yantra*, but has three strings."

"The *Kinnar* resembles the *Vina,* but wtih a longer fingerboard and has three gourds and two wires." (42)

All the later *veenas* of the zither type are only further descendents of the *kinnari.* The most respected of these is the *Rudra veena* which, till recently, reigned supreme in Hindustani music and was popular among commoners also; this is the instrument that is called *been* in common parlance. Like the *kinnari,* the fingerboard is of a wide and smooth bamboo. One end of this holds a flat bridge typical in our instruments and beneath the *dandi* are two very large pumpkins. There are four main strings for melody, under which stand straight and thin, frets attached to the bamboo tube with wax. While the fingers of one hand pluck the strings the other stops them over the frets. Besides the main wires there are two drone strings on one side and one more on the other side of the *dandi.* The *been* was played by men and women, in royal courts and rural settings as can be seen from innummerable miniature paintings of north India. In one class of such pictures, known as the *raga mala* miniatures which personify *ragas* and *raginis* as well as in their literary symbolization, the *been* is invariably a companion of, *ragini Todi,* a lady with the zither whose music enchants deer. "Her slender body anointed with saffron and camphor gleam white like the jasmine flower. The woodland deers are spellbound at the sight of *Todi* splendid, holding a *veena*". Surdas, the immortal Hindi poet, takes the poesy further. Addressing the hero of his poem he says, "Do not play the delicate *veena*. For the deer that draw the chariot in the moon may get captivated and stop, thus halting the moon". It was one of the premier instruments in the court of Akbar and Abul Fazl names Shihab Khan of Gwalior and Purbin Khan as the two court *beenkars* (players on the *been*). The other prominent musicians who are revered as the 'fathers' of instrumental music in the north were Bilas Khan and Surat Sen, sons of Tansen, as well as Misri Singh, his son-in-law. Bilas Khan is considered to be the one who popularised the *rabab* and the other two the *Rudra veena*. Because of their family tree *(gharana)* these musicians are known as the Senias and almost every instrumentalist of the Hindustani system would like to call himself or herself a Senia. Today this is ludicrous, for instruments that were never prominent during Tansen's times—the *sitar*, the *sarangi* and so on—could not have a stylistic resemblance to the older music. And if we listen to even *sitariyas* (the *sitar* players) of the present day, it is easy to make out the vast differences in style, that can really not be grouped as one small musical famliy. While it is true that most of the instrumentalists are 'musical descendents' of the Senia elders in terms of master-pupil lineage, musically they have drifted so far away from style of the *veena* that it would be absurd for them all to claim to be 'Senias'. The *Rudra Veena* is now sadly neglected and there are not many competent players of this instrument. (43—Frontispiece)

There is not much doubt that the zithers, whether they be without frets like the *eka tantri*, the *alapini* and the *vichitra veena* or the fretted ones such as the *kinnari* and the *been* are typically Indian. It is also of great consequence that sculptural representations of zithers from very early times not only abound in but are more or less confined to Hindu temples. The same cannot be said of lutes. A noteworthy point is that lutes appear in our country closely following the Gandharan art movements from the north-west but also migrate along with Buddhist art southwards. Since there are lutes in other cultural areas also, this is but a suggestion which remains to be carefully verified.

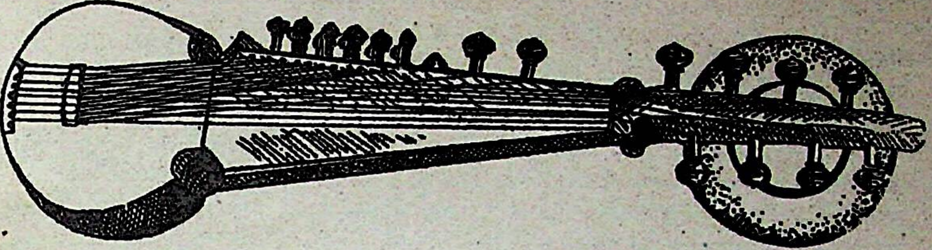
Lutes, as we defined earlier, are those stringed instruments in which the fingerboard is an extension of the resonator. On the other hand, it will be recalled, that in zithers the resonator was placed below the *dandi*. It was also seen that the *ek tar* was one of the possible origins of the lute type wherein the gourd might have been replaced by a wooden bowl. Examples of this direction of evolution were the two kinds of *tambooras*. These instruments are, however, drones and are not employed for playing any tunes or *ragas* for which purpose other lutes were fashioned. It is usual to recognize two types of lutes: the short necked ones and the long necked. In the former, the bowl projects into a curved neck which extends into a short fingerboard. In the latter, the resonator has a neck which continues into a long danda. In both cases, strictly speaking, the necks are almost the same size; the difference is in the lengths of the fingerboards. The adjectives related to the neck are hence misplaced, in a way, and should in fact be applied to the *danda*: short fingerboard or long fingerboard. However, in deference to practice in musicology we shall stick to the traditional terminology.

Fretless shortnecked lutes are also very ancient in our country, and best known of which was the *kacchapi*. The name first occurs in Bharata's

Natya sastra, followed by numerous references in medieval works; it has also been illustrated widely. *Kacchapa* means a tortoise and since the body of the instrument bulged and was convex in shape, somewhat like the shell of the reptile, the lute was known as the *kacchapi veena.* The hollow belly was covered over with leather and the body extended into a short neck which continued on as a fingerboard of small length. There was a crescent shaped bridge on the hide cover, and five strings passed over it to pegs at the far end of the *danda.* It was a plucked *veena* without frets; however, there are stray examples of such lutes with frets in Ajanta as also in Pattadakallu, the latter being in Karnataka (5th to 7th century A.D.). Even today instruments resembling this fretless, shortnecked lute are found in north India under the names *dotara, rubaiya* and so on, though there are minor variations in detail.

Related and perhaps originating from this is the *rabab* which is restricted to northwest India mainly. The word *rabab* might have indicated both bowed and plucked lutes. In early Arabic music, according to many scholars, it seems to have been of the former type. Al Farabi of Arabia, tenth century A.D., describes a *rabab* which could have been a bowed instrument. But the lute of this name, familiar in Kashmir and Afghanistan, is a plucked one and has been known to the northern areas of India for nearly five hundred years now. The mystic poets Kabir and Krishnadasa mention it. The *Ain-i-Akbari* speaks of a *rabab* with "six strings of gut, but some (with) twelve and others with eighteen". *Sangeeta Parijata,* a musical text of the seventeenth century not only refers to the instrument but goes so far as to etymologically derive the word "*rabab*" from the Sanskrit "*rava*" meaning "sound". As per oral tradition the invention of the lute is credited to Tansen, which is not correct as Hindi literature prior to him refers of it. But the closest association, perhaps, of the *rabab* is with Mardana the inseparable companion to Guru Nanak who lived in the fifteenth century. Bhai Mardana is said to have been descended from Arabian stock and his prowess of the lute has become legendary. The *rabab* he played on seems to have been redesigned from an older type by Nanak himself. Sadiq Ali Khan of the nineteenth century says, "The *rabab* has five main strings and twentytwo metallic ones below, for resonance. It has come to our knowledge, that there is another *rabab* which has six main strings, but these are of silk instead of goat gut. Some authorities affirm that this *rabab* is the invention of Guru Nanak Shah Fakir. The Guru possessed superior knowledge of this art as well, and the invention is the result of his genius". While the Guru sat in deep meditation, Mardana would play and the strings sounded "*Nirankar ... Dhan Nirankar ...*"—"Formless ... Hail Formless".

The *rabab* now in use in Kashmir has a hollow wooden body with a waist. The resonator is covered with skin and the fingerboard with



44. *Sarode*

a wooden plank. On the hide cover there is a thin bridge over which go six strings of gut tightened by pegs; besides these main strings there are eleven metallic ones acting as resonators. One interesting fact is that there are no frets as such, but three guts are tied across the *dandi* at its farther end to indicate 'note positions'. This contrivance could well have developed into the metallic frets of later instruments.

Very much similar to this is the *sarode*, one of the most dignified concert lutes of Hindustani music now known almost everywhere in the world. The name of the instrument it is often claimed is derived from "*Sarada veena*", for which there does not seem to be any base except an imaginary one, because Indian music texts have no reference to such a *veena*. However, "In the year 913 a certain Ibn al-Awas, a native of the Samrkand region, invented a stringed instrument of unusually wide compass known as the *sharud*". Early Indo-Persian literature also mentions the *sarode*. One Hasan Nizami of early medieval times, describing the court scene of a Delhi *sultan*, says, of a minstrel. "The tuneful nightingale bewailed like forlorn lovers and he cried like a lover over the string of *Rud* and the music of *Sarode*." Again there was a "beauteous, fairy faced musician, decked with plumes of feathers and possessed of light-diffusing cheek, who sang like a nightingale and performed Messianic miracles by her Davidian melodies. The sounds of *Rud* and *Sarode* weakened the power of endurance and by the strokes of her *Musiqar* (an instrument) she attracted the birds from their airy heights down to the lowest level of the earth". While the *Rud* was an instrument, we can not be equally sure that the "*sarod*" here meant a lute or a kind of melody. Even today central Asia has the *ud* which is a short necked lute. All these lead us to infer that, most probably, the Indian *sarode* is a descendent of this central Asian instrument; the similarity not only in construction but in the word ending (*ud* and *sar-ode*) is worth noting. Like the *rabab* the body is of wood and waisted; only it is much more shallow. Another difference is that the fingerboard has a steel veneer instead of a wooden one. There are four principal strings, four subsidiary ones, two drones and about a dozen sympathetic vibrators (*tarab*), all of metal. Like the *rabab* the *sarode* is also played with a small wooden piece called the *java*.

There are two more instruments of this class which we may note in passing. One is the *sur singar* which is a kind of an elder brother to the *sarode*. It is nearly twice in size and while the fingerboard has a steel plate, the resonator is closed with wooden lamination instead of hide. It is said that the *sur singar* was invented by Jafar Khan Rababi, the court musician of Maharaja Udit Narayan Singh of Varanasi who lived in the early part of the nineteenth century. Because of its size and the nature of its body, the lute has a very fine tone; but it is a pity that one very rarely hears this *veena* now and there are few musicians who play it at present.

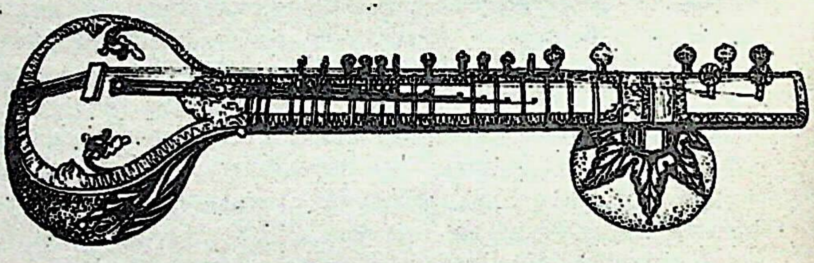
Another exotic specimen is the *svarabat* or *svaragat*. This is somewhat of a cross between the *kacchapi*, or more strictly the *rubaiya* and the *dotara*, and the *rabab*. In appearance it is very much like the latter but larger; but the fingerboard resembles the thin type as in the *dotara*. Strangely enough it is not found in the north where we could expect it; on the other hand, the known examples is in the south. The only reliable evidence is a picture of Umaiyalpuram Krishna Bhagavatar, the disciple of Sri Tyagaraja, playing on it. Some stray specimens are available, one of which can be seen in the museum at Pudukottai in Tamil Nadu.

How the long necked lutes developed in our country is still not clear. There are stone caves of primitive men in central India which have wall paintings in some of which lutes with long necks have been noticed. But in general most of the visual evidences—barring a few scattered ones—show short necked *veenas* but not the long necked ones. More definite data will be necessary for us to trace out the history of these instruments unequivocally.

The best known long necked *veena* without frets is the *gottuvadyam* of Karnatak musicians; the instrument is sometimes also called the *Mahanataka veena*. Here again historical information is scanty and in all probability the first reference to it is in a Telugu work of the seventeenth century. The instrument itself is simple though the playing is difficult. A wooden 'spherical' bowl closed on the top with a wooden plate serves as the resonator. This bowl projects into a small neck to which is attached the fretless fingerboard. This terminates in the animal motif, *yali*. Near this end there are four pegs which receive the metallic strings which pass over the bridge on the resonator bowl. Besides these four main strings on which melodies are played, there are three more on one side meant for giving the drone and the *tala*. What is interesting is the presence of the *tarab* or resonating strings on the instrument. This is the only Karnatak instrument with such an adjunct and seems to be a recent innovation, which is borne out by the fact that instrumentalists there have no name for it! The plucking of the strings is done as in the *veena* to be described. For playing a tune or a *raga* a small piece of cylindrical very hard wood or ebony is moved along the strings and finer pitch variations as also *gamakas* are obtained by slight pressures on them. This piece is known as the *kodu* and the name of the instrument seems to be derived from it; the reader will recall that this was exactly the method of playing the ancient *eka tantri* and is also met with in the Hawaiian guitar. Since there are no frets and the wires are raised slightly off the fingerboard, the technique is difficult and delicate.

The queen of all *veenas* is the *Sarasvati veena*. (Incidentally, Hindustani musicians also call their *veena*, the zither already described, by this name, We shall, however, refer to the south Indian *veena* now being discussed as the *Sarasvati veena* and the Hindustani zither as the *Rudra veena*). It deservedly occupies this exalted position not only because of its elegant beauty of appearance and tone but also by virtue of its versatility. In a way, it is the only self-contained *veena* today: it has strings to play the *raga* and that too in a wide range of pitch, it has the drone so necessary for Indian music, and these drone strings are so placed that *tala* also can be played on them. In other words, the *veena* has in itself *svara*, *raga* and *tala*—a potentiality which no other instrument has. The present structure of the lute seems to have come to fruition at Tanjavur in Tamil Nadu by about the seventeenth century, during the reign of Raghunatha; it is, hence, often referred to as the *Tanjavur veena*. The instrument, like the *gottuvadyam*, is made entirely of wood. The resonator or *kudam* is a deep vessel carved out of wood and covered with a wooden plank. This soundboard protrudes into a neck to which is fixed the long fingerboard that ends in the mythical figure of the *yali* (not to be confounded with the *yazh*). The bridge which stands centrally on the sound box is a complex unit. The principal section is a wide wooden piece slightly sloping in the direction of the strings, a construction so typical of many of our *veenas*. On the upper surface of this is glued a brass lamella which seems to be a continuation of the traditional structure present in the ancient *eka tantri*. Attached to—rather growing out of—the main bridge is a curved auxiliary part, of wood which is also a bridge. Four strings of metal go over the main bridge and they are used for playing the melody; three, called the *sarani*, pass over the side bridge and these are employed as the drone and for striking the *tala*. All strings are tuneable by pegs and by special minute coiled wire pieces. While the melody strings are plucked downwards with the first two fingers, the *sarani* are flicked with the little finger of one hand. The strings are pressed with the fingers of the other hand just over the brass frets that are fixed to the *danda* with wax. Beneath the *danda*, at its *yali* end, there is a secondary gourd or a metallic imitation of it. The most common way of holding the *veena* is 'horizontal'. The musician sits cross legged on

45. *Sarasvati veena* (South India)
46. *Sitar*



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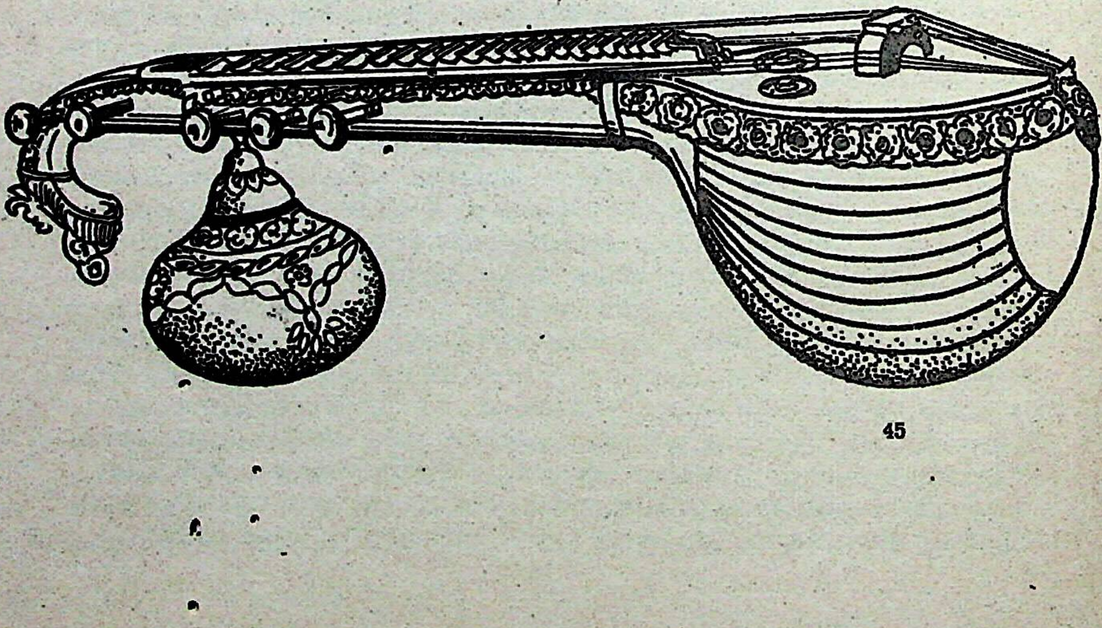

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the floor; the large *kudam* is placed on the ground with the subsidiary gourd resting on the lap. However, a generation ago there were *vainikas* (*veena* players) who used to hold it vertically—a practice that was seen sometimes in Andhra and Mysore. The *veena* technique, having attained such a subtle sophistication, has developed into different styles. One major style is the Tanjavur style where great stress is laid on certain slowness of tempo and on *gamakas*; the Andhra and Mysore approach relies more on variations in plucking, staccato phraseology and simultaneous playing of more than one string. One important fact, not confined to the *veena* but including all instruments, is that in Karnatak music there are no special instrumental compositions apart from songs meant for singing; all playing relies heavily on vocal music. The most renowned *vainikas* of the three schools were Dhanam of Madras, Sangamesvara Sastry of Andhra and Seshanna of Mysore. **(45)**

What the *Sarasvati veena* is to Karnatak music the *sitar* is to the Hindustani. It holds the same pre-eminent place and enjoys the same popularity; perhaps more so. And because of the cultural exodus of many *sitar* players it has gained a very wide reputation outside India now. Today it is a very important Indian instrument, though its predecessors might have come from lands bordering the northwest provinces of our country. It is a long necked lute and, as was mentioned earlier, such *veenas* have been seen in some cave murals in central West Asia. Till recently it was believed that the poet-musician, Amir Khusrau, of the thirteenth century, A.D. was the inventor of the instrument. This appears to be more a belief than a verifiable fact, as known reliable textual sources are not older than say the eighteenth century. Significantly enough an author of the eighteenth century says that what is popularly known as the *sitar* is called the *nibadha* tamboora; in other words we may see here a close connection between the *sitar* and the *tamboora*. One other opinion is that the lute was evolved out of the ancient *tri tantri*: a three stringed instrument. This idea is based on the similarity of names. *Seh* in Persian is 'three' and *tar* means 'strings'. So a lute having three strings is *seh tar* which changes into '*sitar*'. *Tri tantri* in Sanskrit has an identical connotation: *tri* means 'three' and *tantri* 'strings'. While the semantic similarity is certainly extremely close, structurally the *tri tantri* might have been entirely different. All available clues make us suspect that the *tri tantri* was a zither from which, of course, a lute cannot evolve. More correctly, therefore, a plausible line of sophistication might be sought in the *setar* or *saitar* of Kashmir. This is a lute smaller than the *sitar*. Its fingerboard projects from a gourd resonator and bears a number of gut frets. It has a wide or narrow bridge and seven strings. Thus, the shape of the lute, the moveable gut frets *and* the name make it a very likely prototype of our concert instrument.

The *sitar* gained importance and prestige not very long ago; prior to about a century from now it was not even considered 'respectable'. It was the *Rudra veena* which was the highbrow instrument. Indeed, the traditional *ustads* of the *veena* rarely, if ever, taught it to any one outside their fold; the zither was a family prerogative! 'Aliens' who knocked at the doors of their citadels of knowledge were initiated into 'despicable' instruments such as the *sitar*. However, encouragement to the *sitar* and its style came from the later half of the eighteenth century. It was at this time that great masters like Amir Khan, Barkatullah Khan, Bahadur Khan, and Gulam Raza lived. They were exceptionally good instrumentalists and their beautiful music on the *sitar* raised it to a respectable status and gave it wide recognition. Tastes in music were changing and the sonorous *veena* and its grave style were losing their appeal, just as the *dhrupad* singing and *pakhavaj* were giving way to the *khyal* and the *tabla*; a kind of lyrical approach began to be preferred which encouraged the music of the *sitar*. Of the many *sitariyas* Masit Khan and Gulam Raza deserve special mention for they were the creators of styles which form the main bases of today's playing. The compositions of Masit Khan were developed into the *Masit Khani baj* which is lower in tempo, does not indulge in criss cross rhythm and provides ample scope for leisurely expansion. *Raza Khani baj*, named after Gulam Raza, on the other hand is more intricate and quick. While the *sitar*, thus grew into a major lute with its own idiom and diction, the heavier *alap* (a rhythm free exposition of *raga*) of the *veena* was taken over by the *sur bahar* which is a kind of outsized *sitar*.

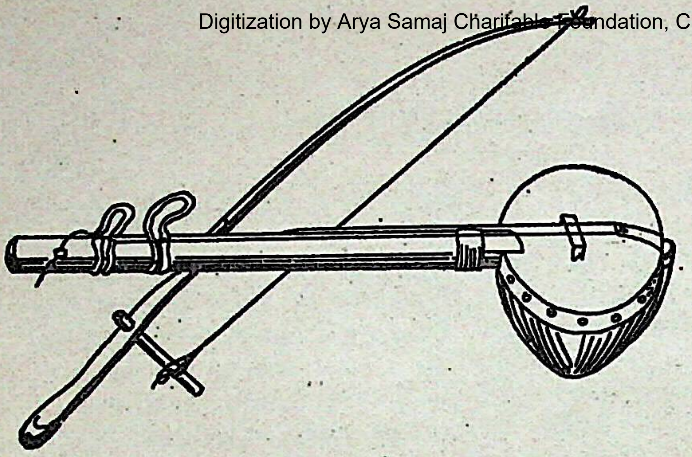
Like most zithers and lutes in the north the *sitar* has a more or less spherical gourd at the lower end; when the pumpkin is flat the instrument is referred to as the *kacchua*, 'the tortoise shaped *sitar*'. The *tumba*, as its shell is called, is glued at one end to a neck and its top is covered with a wooden board which may be either flat or slightly bulging. To the neck is fixed the long fingerboard, the *dandi*, onto which are *tied* the convex brass frets, so that they can be moved to the required scale. Such an arrangement of 'mobile' frets is one type called the *chal that* or the 'moveable scale'. While this is the common feature now, there were older models with fixed frets—known as the *achal that* or immoveable scale as in the *Rudra veena* and the *Sarasvati veena*. The fingerboard holds, in costlier kinds, a second gourd at the farther end. Five metal wires for playing the *raga* are stretched over the main bridge; besides these there are two drone strings called the *chikari*. The instrument has also anywhere from eleven to seventeen thin strings, the *tarab*, underneath the principal ones for additional resonance. (This is not provided in the less expensive *sitars*). While the main strings and the *chikari* run over a bigger bridge which, again, is characteristically wide, the *tarab* goes on a smaller flat bridge placed below the larger one. As with the other *veenas* of India, the bridges are of bone, antler horn or hard wood. The strings are excited by plucking them with wire plectrum worn on the index finger the movements of which are forward and backward, towards and away from the palm. Like in the south Indian *veena* the *chikari* is used for providing the drone or basic note; it is however not employed for giving the *tala*, unlike the *sarani*. (46)

Bowing as an act of sound production on instruments and bowed instruments themselves have posed very complicated organological questions regarding their origins. Many hypotheses and conjectures have been advanced, discussed, accepted and rejected. The three principal seats of culture which are the scholars' favourite choices are the Nordic region in Europe, India and central-west Asia. So far Western scholars have tended to concentrate on the first and the last of these. As for India they do concede it a place of priority, but rarely is their documentation on this country adequate or up to date. In one of the best books on the subject, published recently, there is a discussion of the possibility of bowed instruments having been first developed in our country. But soon the author dismisses the idea on the basis that the oldest visual representation in India of bowed instruments is from the seventeenth century A.D., whereas we have wall reliefs seven hundred years earlier! The book does not even mention our tribal bowed instruments of which there are galore. Even a cursory listing gives at least fifty tribal and folk instruments of this class, though sometimes there really are no considerable differences among them.

It is quite possible that instruments of this kind find references in Indian texts as old as the seventh century A.D. and subsequent musical works have frequent mention and descriptions of bowed instruments. Again prototypes of the violin, a number of which are met with in folk and tribal music, have been sculpted as early as the tenth century examples of which are present in Vijayavada in Andhra and the Arakesvara temple near Mysore. Instruments of the *sarinda* type have come to notice in Vishnupur in Bengal; and a few temples of west India have reliefs of the *sarangi*.

In the face of so much evidence the inference is only very obvious. India has known bowed instruments for at least eleven hundred years and there is a dire necessity for proper investigations on an extensive scale to establish their due place in world music.

There is almost no corner of the country which does not, in some form or the other, have the violin kind of instrument. In this type the sound box, which usually is the shell of coconut or a small wooden chamber, is held near the shoulder of the player and the fingerboard extends downwards along this arm. The bow is held with his palm downward and the string is stopped with the balls of the fingers. To this class belong the *pena* of Manipur, the *kenra* and the *banam* of Orissa, the *Ravaṇa hatta* of western India, the *kingri* of the Pradhans in Andhra and



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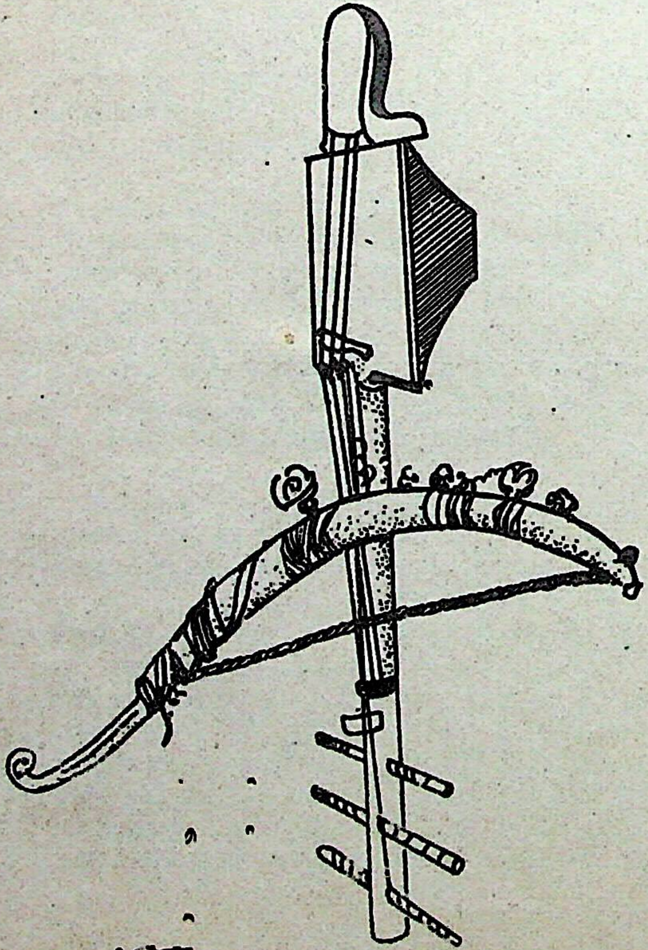

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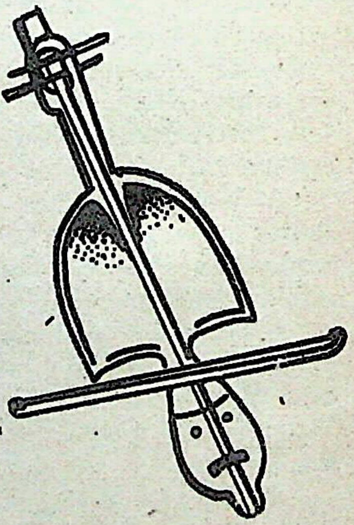

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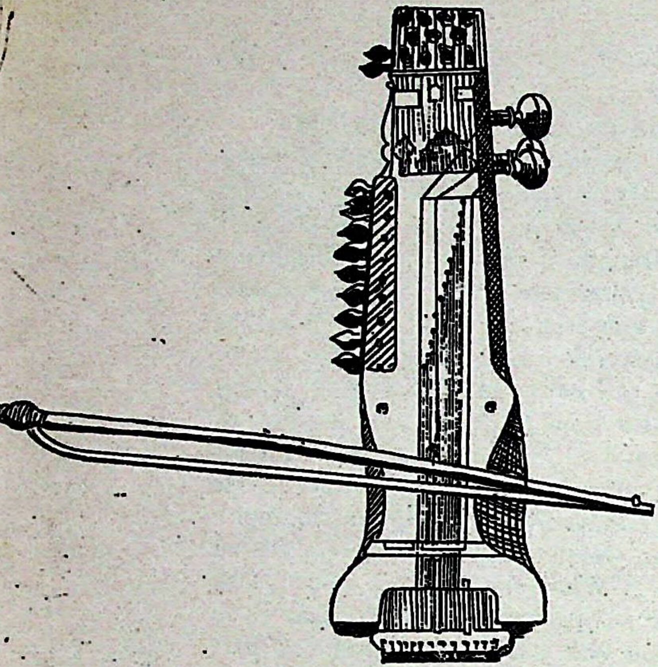
47. *Kingri* of Pradhans
48. *Banam*
49. *Sarinda*

Maharashtra, and the *veena kunju* of the Pulluvans in Kerala. (47)

A typical example of this group is the *kingri* of the Pradhans who are associated with Gonds. These latter people were once upon a time an important and ruling community in Madhya Pradesh, Maharashtra and Andhra but now are an humble though populous tribe who have the Pradhans as their priests, bards and musicians. The latter's function is to sing of the Gond family traditions and perform at various religious rites, death ceremonies, marriages, festivals and so on. The three important instruments used by them are the *pepre* (a double reed instrument like the *shehnai* and *nagasvaram*), the *dhol* (a drum) and the *kingri*. The last is dear to them and they have a legend about how it was invented. There was a *raksasa* (demon) who was killed by a clever ruse by Bhimana (the youngest of the five Pandavas as per their mythology). Manko, the daughter of the demon, sat weeping when Toti the parrot of the house came to ask for his dues. " 'What shall I give you?', said Manko, 'I have nothing'. Then she took an unburnt piece of wood from the fire; then Toti opened his cloth, and she put it in saying, 'of this make a *kingri* and when you play it the Gonds will give you presents of calves, bulls, cloth or grain.' " The instrument has a squarish resonator box and is covered with goat skin. The fingerboard is a long bamboo inserted into it and has three pegs. Three tufts of horse hair form the 'strings' which are bowed, the musician holding the *kingri* with the sound box near the chin and the pegs near the palm of his outstretched hand, like the violin. The bow has a number of bells of brass (*ghunguroo*) tied to it, giving a delicate rhythm accompanying the music. (48)

The *Ravana hatta* or the *Ravana hasta veena* of Gujarat and Rajasthan is possibly a vital link between the very ancient bowed instruments which might have existed before it and the violin. The name commencing with Ravana, historians have without much thought or hesitation attributed its invention to the scholarly villain of the *Ramayana*. However, it is more probable that the *Ravana hatta* was first mentioned in the seventh century A.D., though how it ever came to bear the name of the demon king is one of those unsolved mysteries. Today it is a very common and popular fiddle in western India. The bowl is of cut coconut shell the mouth of which is covered over with hide and like the *kingri* a bamboo *dandi* is attached to this shell. The principal strings are two: one of steel and the other of a set of horse hair; besides these there is a *tarab*. The bow is much longer than with the *kingri* but like with it the bow has jingle bells.

While the two instruments described above are of one kind in which were included the *pena*, the *banam*, the *kenra*, as well as the *pulluvan veena*, the other class comprises those wherein the manner of holding fiddle is the reverse: resonator below and the pegs above. Of such a kind are the *kamaicha*, the *sarinda* and the *sarangi*.



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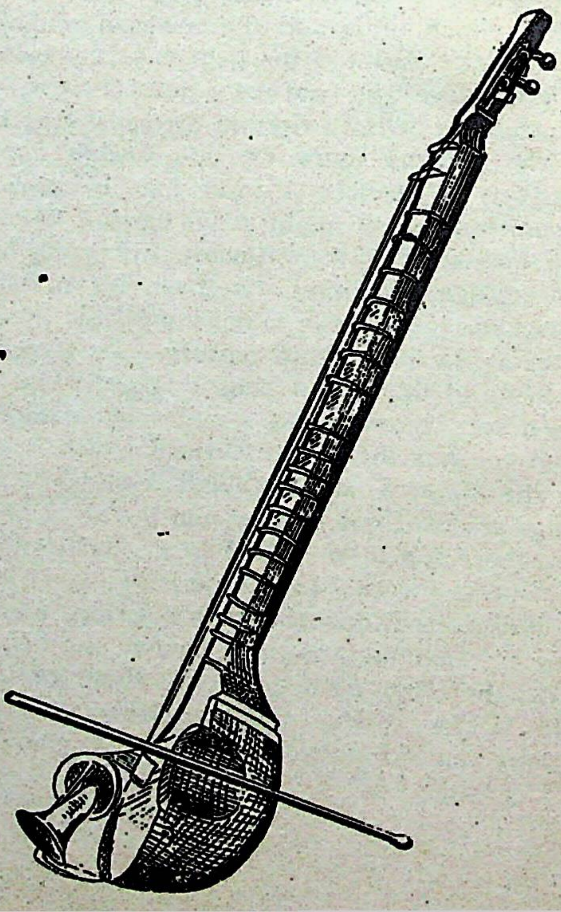
50. *Sarangi*

51. *Tar shehnai:* It is an *esraj* to a string of which a gramophone soundbox and megaphone are attached.



The *kamaicha* is of special interest as it connects the Indian subcontinent to western Asia and even Africa. As a matter of fact, it is the oldest bowed instrument in world literature, barring, perhaps, the *Ravana hatta*. As far as information is available, it was known in Egypt as well as in Sind from the tenth century A.D. The commonly accepted idea is that its name is derivable from the Arabic-Persian word *kaman* meaning 'bow'. It is of course a moot point whether the *kamaicha* went from Sind in the Indian subcontinent to west Asia and Egypt or *vice versa*; also was the ancient *kamancha* similar in shape, size and the mode of playing to our *kamaicha*. Answers to these queries might give us a better insight into the history of Indian bowed instruments. The *kamaicha* now found in our country is a bowed lute of Monghniar people of west Rajasthan which borders on the Sind province, now in Pakistan. The whole instrument is one piece of wood, the spherical bowl extending into a neck and fingerboard; the resonator is covered with leather and the upper portion with wood. There are four strings which are the main ones and there are a number of subsidiary ones passing over a thin bridge.

The *sarinda* is found along the northern hilly tracts and with some of the tribes in Bihar. A very noticeable characteristic of this instrument is its shape. It will be remembered that all the bowed lutes described so far had one hollow resonator which was mostly spherical. But the *sarinda* has a body so deeply pinched that it looks as if it is of two parts. The lower section is a small pear shaped one and it is only this that has a hide covering. The upper part is much bigger and has a kind of 'winged' shape; further it is completely open and continues on to the *dandi*. Over this run four strings of twisted cotton, gut or metal. **(49)**

Finally we come to the most important of 'Indian' bowed instruments: the *sarangi*. The concert model is made of one block of wood and is about sixty centimeters in height. The hollow body is wide but waisted at the bottom and this extends into the flat fingerboard. The lower portion is covered with parchment and acts as the main sound box, while the upper portion has a wooden cover. The principal strings, four in number, are of gut usually and as is characteristic of north Indian instruments there is a *tarab*. The most notable aspect is the finger technique not used in any other case: the fingers are stopped with the sides of the finger nails and not by the balls of fingers. While the folk types are very much like the concert one and nearly of the same construction, there is a giant variety known as the *mandar bahar* which gives a bass sound and is sometimes met with in classical ensembles. **(50)**

The *sarangi*, more than any other stringed instrument, is at once a typical folk and a concert lute. This again opens up a very enigmatic question in our music, which is this. Here is an 'Indian' instrument deeply rooted in certain folk traditions and highly sophisticated into one system—that of the Hindustani classical music as a very desirable accompaniment but yet shunned totally by Karnatak musicians. Not that the *sarangi* is completely absent in the south. Strangely enough isolated examples of its uses are known and that too with ***oduvars*** who are musicians who sing the *tevarams*, an ancient Tamil hymnody. In spite of such incursion into very orthodox camps the *sarangi* has not been adapted into south Indian classical music which has taken to a more alien instrument, the violin. Even in the north the *sarangi* was better known as an accompaniment to the music of nautch girls and *sarangiyas* (players on the instrument) were one of the lowest classes of instrumentalists socially. Today the picture is very different, for the *sarangi* is very much in demand in highbrow concert, its players have received national honours and earned worldwide reputation.

There are a number of folk *sarangis*, all more or less confined to Rajasthan and contiguous provinces, though the peculiar fingering methods are known as far away as in Yugoslavia and Greece. The folk types found in our land are the *Gujeratan sarangi*, the *jogi sarangi*, the *Sindhi sarangi* and the *dhani sarangi* all of which are of general similitude but vary in details. Evidently it is from these that the concert instrument has evolved.

A curious combination of the *sarangi* and the *sitar* is the *dilruba* (or the *esraj* in Bengal). This has a resonator very much like in the former: it is also held and bowed like it. But the *dandi* is long and has frets tied as in the latter. Though, in a way, the sound is more mellow than that of the *sarangi*, it has rarely been used in concerts of classical music: and while it is not a folk instrument either the *dilruba* is employed in light music and is a favourite with Bengali musicians as *esraj*. (51)

Bowed instruments, then, are spread far in the country not merely geographically but ethnically and culturally. However, notwithstanding their popularity we are still faced with the problems of their beginnings and migrations. This is not merely in India but the world over. A very distinguished scholar said nearly seven decades ago: "the origin of bowed instruments remains an unsolved problem". We have not solved it yet.

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